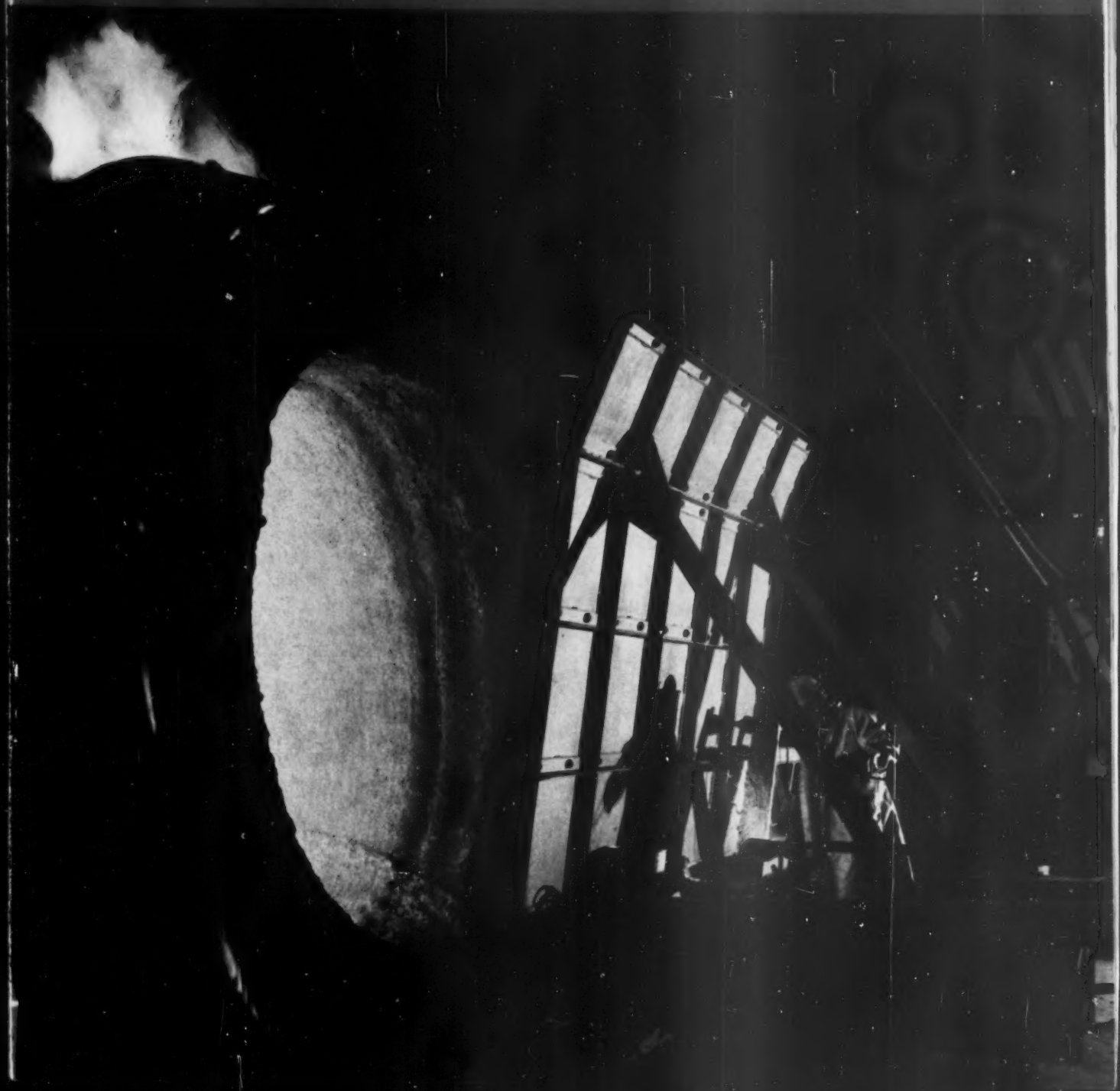
A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

Incorporating *International Commerce*

AUGUST 7, 1972

Commerce Today

Coming Developments in Business and Technology



Newsmemo

A major market analysis of the domestic shipping industry is being undertaken by the Maritime Administration. This step is an upshot of a spring conference at St. Louis that brought together 200 executives from the industry's Great Lakes, inland waterways, and domestic ocean services segments. The contract analysts, A.T. Kearney of Chicago, have five aims: forecasting the trade flows that could be available for movement by water; analyzing the future competitive environment in which the industry will operate; assessing legal and regulatory constraints; conducting an industrywide financial analysis, and working all of this into a list of potential market opportunities.

Important opportunities for U.S. businessmen can be found in the pages of a new Arthur D. Little study of Southeast Asia's regional sea, air and land transport requirements for the next 20 years. The 145 recommended projects, involving infrastructure, vehicles and institutions, could amount to a $3.2 billion investment, with most of it to be built in the 1970s. The Asian Development Bank is ready to help, and other multilateral financing will be sought. Complete sets of the five-volume survey are available at the Office of International Business Assistance, Room 3411, Main Commerce Building, Washington.

The DISC tax incentive program for exporters has caught on with U.S. companies. Through June 30, 2,414 firms have notified the Treasury Department that they are forming Domestic International Sales Corporations--DISCs. In the month of June alone, 325 such notifications were received at Treasury. The DISC program granting tax deferral benefits on income derived from export became a part of the U.S. tax code this year.

Wild fires in Alaska now burning about 30,000 acres of forest each day are challenging the nation's fire control techniques. Seven meteorologists from Commerce's National Weather Service, a cloud seeding team from the Bureau of Land Management, and 1,500 fire fighters are teaming to a halt this outbreak, which is draining an important national resource and causing aircraft navigational problems. The meteorologists are supplying information on potential for lightning discharges and forecasts of relative humidity which can pinpoint the intensity of the fires, and wind forecasts, which can determine speed and direction of spread.

The nation's energy crisis could be on the way to solution if more private capital can be channeled into development of new energy sources. Chase Manhattan Bank so concludes in a report on the future energy outlook, which sees national overall primary energy requirements almost doubling by 1985. According to the Chase analysts, the problem is that vast power resources are "not accessible within the current economic framework. To find, develop and make available energy to the nation will require vast amounts of private capital."

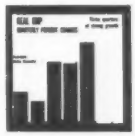
Commerce Today

Incorporating *International Commerce*

Vol. II, No. 22, August 7, 1972

2 Economic Highlights

The economy expanded rapidly in the second quarter while the rate of inflation declined sharply; the rate of expansion in GNP was the highest in six years, and the rates for the previous two quarters were substantially higher than originally reported.

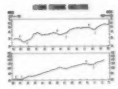


4 Resurgent Steel Industry Zeros In On Productivity

Surpassed last year as the world's leading steelmaker by the USSR, a giant industry hopes to regain its first place position by the end of this year.

8 Pace Of Economic Push Is Full Speed Ahead

Economic analyst sees a major broad-based economic expansion under way which should last three years following a review of the rising indicators.

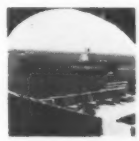


10 Nation Encourages Its Inventors, Innovators As Valuable Resource

A special office smooths the path to the marketplace for Americans with ideas; business, industry, education, law, technology leaders serve as advisors.

13 U.S. Containerships Inject Momentum Into Puerto Rico Economy

American-flag merchant marine trade has hastened development; containerization has helped place this isle behind Japan and Israel in economic growth.



17 Domestic Business Report

Offshore island could be practical solution—Main data unit may emerge from SESA—Five-city survey looks at nation's housing—More minority aid from resource centers—Flood victims warned about disaster chasers.

25 Science & Technology Report

Communications confab seeks state ties—Redesign of matches, lighters recommended—Jet seeders standby to modify hurricanes—New Weather Watch plan to improve satellite system—Safer kitchen ranges sought through design change—Patents of special interest.

33 International Commerce Report

Quarterly world market report from 40 countries—Petrochemical trade mission visits Eastern Europe—Details on tariff changes as U.K. enters EEC—U.S. exhibitors score in Tehran, Poznan—Business outlook in Malaysia, Chile, Burundi, Togo—List of upcoming U.S. overseas promotions—Investment, trade leads.

COVER: *Standing behind a heat shield protecting him from the 3,600-degree temperature radiating from a basic oxygen furnace at Bethlehem Steel's Sparrows Point, Md., plant, a steelworker tests the quality and specifications of a ladled specimen. For steel industry's story, see Page 4.*

U.S. DEPARTMENT OF COMMERCE

PETER G. PETERSON
Secretary

JAMES T. LYNN
Under Secretary

B. R. LITTIN
Director of Public Affairs

DICK EVANS
Editor

CLARENCE M. ZENS
Associate Editor, International Commerce

RICHARD BALENTINE
Associate Editor, Science and Technology

ARTHUR McDERMOTT
Associate Editor, Domestic Business

AMERICO A. W. FAVALE
Coordinator of Graphics

Published biweekly by the U.S. Department of Commerce, Washington, D.C.

Annual subscription rate $15 ($3.75 additional for foreign mailing, $14.30 additional for domestic air mailing). Single copy 60 cents. Make checks or money orders payable to Superintendent of Documents and mail to Superintendent, U.S. Government Printing Office, Washington, D.C. 20402, or to any U.S. Department of Commerce Field Office.

All subscription inquiries and address changes should be sent to the Superintendent of Documents, at the above address. This is the central distribution agency for U.S. Government publications.
Microfiche copy available at 95 cents per issue from National Technical Information Service, Springfield, Virginia, 22151.
Other inquiries should be sent to the U.S. Department of Commerce, 14th Street and Constitution Avenue, Washington, D.C., 20230.

Contents of this publication are not copyrighted unless indicated, and if not so indicated, the articles may be reproduced in part or in full without any prior consent. Use of funds for printing this publication approved by the Director of the Office of Management and Budget November 12, 1971.

ECONOMIC
HIGHLIGHTS

Real Growth In GNP Hits Highest Rate In Six Years; Inflation Pace Plummets

Economic Highlights is prepared by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

The economy expanded at a vigorous pace in the second quarter while the rate of inflation showed a sharp decline. Gross National Product advanced at an annual rate of almost 9 percent after adjustment for price changes. It was the fastest rate of expansion in real terms since the fourth quarter of 1965. Moreover, the growth rate in Real GNP in the previous two quarters was substantially higher than originally reported.

The GNP deflator, a broad measure of price changes, increased at an annual rate of only 2 percent in the second quarter. This compares to 5 percent in the first quarter when there was a bulge in prices following the wage-price freeze. Except for the 1971 fourth quarter, when prices were held in check by the freeze, the second quarter rate was the lowest since the fourth quarter of 1965. With this sharp drop in the second quarter, it now appears that the Administration's forecast of a 3¼ percent increase in the GNP deflator in 1972 is within reach.

There has been a marked change in the economy since the introduction of President Nixon's New Economic Policy in August of last year. The major objectives of that policy are a high rate of economic growth and a significant decline in the rate of inflation, and the new figures show that these objectives are being realized. Over the past three quarters, Real GNP has increased at an annual rate of more than 7 percent and the GNP deflator has risen at an annual rate of less than 3 percent.

An encouraging aspect of the GNP outlook is the acceleration of consumer spending—the largest component of GNP—in recent quarters. As consumers have become more confident, their spending has increased faster than their after-tax income. As a result, the saving rate has declined from 8.6 percent to 6.6 percent over the past year, and is now close to the average of the past 25 years.

Homebuilding boosted the economy last year and on into the first quarter of this year; it remained at a high level in the second quarter but did not contribute to the large gain in Real GNP. Business spending on plant and equipment has increased strongly over the past three quarters while, over the same period, business inventories showed virtually no gain until the second quarter.

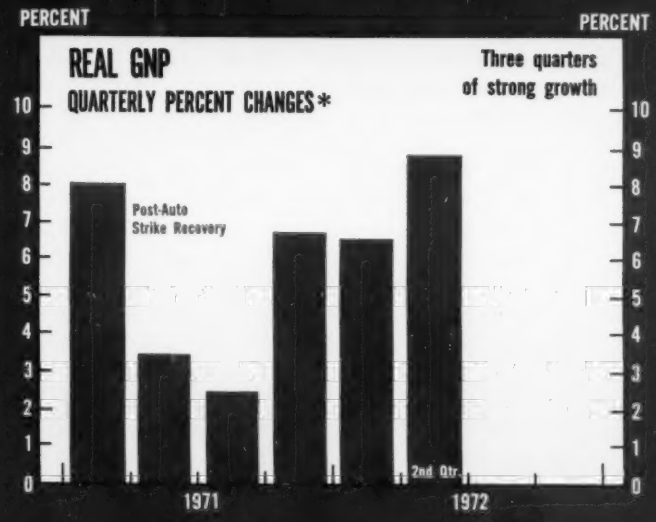
In the first half of 1972, Real GNP increased at an annual rate of over 7½ percent. Prospective expansionary forces in the last half of the year include further inventory accumulation, anticipated improvement in the export-import picture, and the momentum of strong investment and consumer spending. Thus, the prospects are excellent for exceeding the Administration's forecast of a 6 percent gain in Real GNP in 1972.

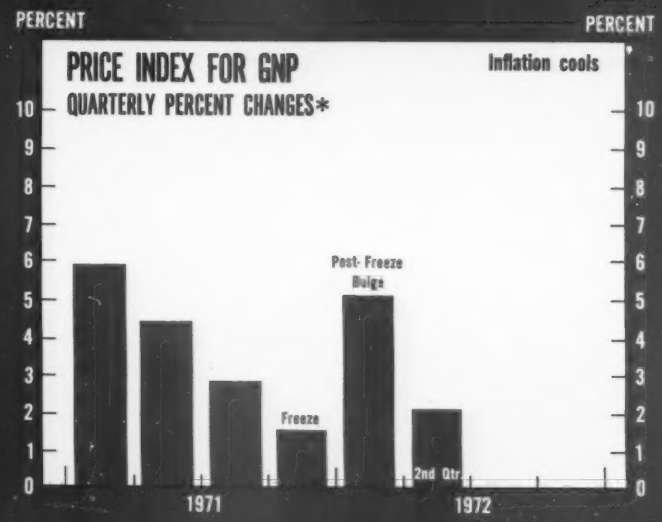
Other economic data

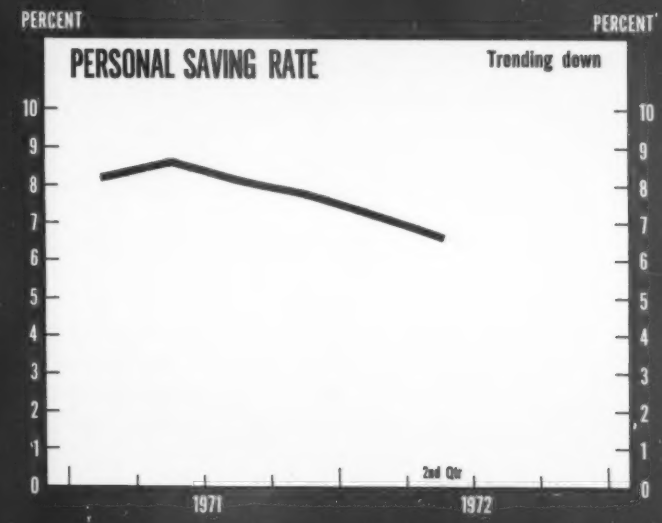
The strong uptrend in orders for durable goods plus the steadily increasing backlog of unfilled orders indicate that factory production will continue to increase in the months ahead.

The wages of American workers have been increasing for many years in dollar terms but after 1965 the gains were largely offset by rising prices. For example, in mid-1971 real weekly earnings were not appreciably higher than six years earlier. There has been a significant improvement in the past 12 months, however; with inflation moderating, workers' average purchasing power rose 4 percent from June 1971 to June 1972.

Latest Indicators







* Annual rate.
All data seasonally adjusted.
1/ Private non-agricultural workers. Excludes social security and Federal income taxes calculated for worker with three dependents.

Commerce Today
Vol. II, No. 22
August 7, 1972

Resurgent Steel Industry Zeros In On Productivity

Labor-Management Committees Forming To Identify And Eliminate Inefficiencies

The giant that is the United States steel industry, surpassed as the world's leading steelmaker last year by the USSR, is getting back on its feet and may regain its first place position by the end of this year.

New era for steel

Steel experts in Commerce's Bureau of Domestic Commerce predict a new era of expansion for the domestic industry and look for at least two years of continued strong growth, reversing the downward slump experienced by the U.S. steelmakers during 1970 and 1971.

Climbing back from a 12-year low recorded in late summer of 1971, U.S. shipments of steel mill products are expected to reach a record high of 95 million tons by the end of 1972, up 9 percent over 1971 shipments. Raw steel output for this year will probably reach a high of 138 million short tons, nearly 15 percent more than the 120 million tons produced in 1971, and close to equaling the record tonnage output for raw steel set in 1969—141 million tons.

BDC staff members cite some of the reasons for the two-year low period in the U.S. steel industry as a drop in consumer demand for steel and steel products during economic cutbacks, as well as the sharp dip in demand for steel during the GM strike period, the rundown in inventories built up in anticipation of a possible steel strike last year, and the huge dent in the U.S. market for steel made by imports from foreign steelmakers.

Contrasting the picture with last year's data, steel production and shipment figures are seen returning to a steady rising pace, except for seasonal fluctuations (such as the annual expected summer lag in the industry).

That summer lag did see U.S. raw steel weekly output declining nearly 4 percent in late July. In fact, the week ending July 22 showed the nation's mills pouring only 2,318,000 tons of steel, only slightly above the amount poured a year ago. In 1971, however, this signified the beginning of a drastic decline, since steel buyers had been stockpiling steel to avoid shortages from an anticipated industry-wide strike expected in August, but which never occurred.

Consumption of steel in the United States is supposed to climb at least 6 percent this

year. The decided growth in both the automotive and the construction industries—which account for about half of the steel consumption in the country—will contribute to the increased demand. Needs of other manufacturers who use steel or steel products—such as metalworking machinery and container manufacturers — are also rising with the recovery in the economy. And employment in the steel industry, which dropped 9 percent to an average of 367,000 production workers last year, has been showing revived growth since the low of 315,000 in October 1971.

Problems still there

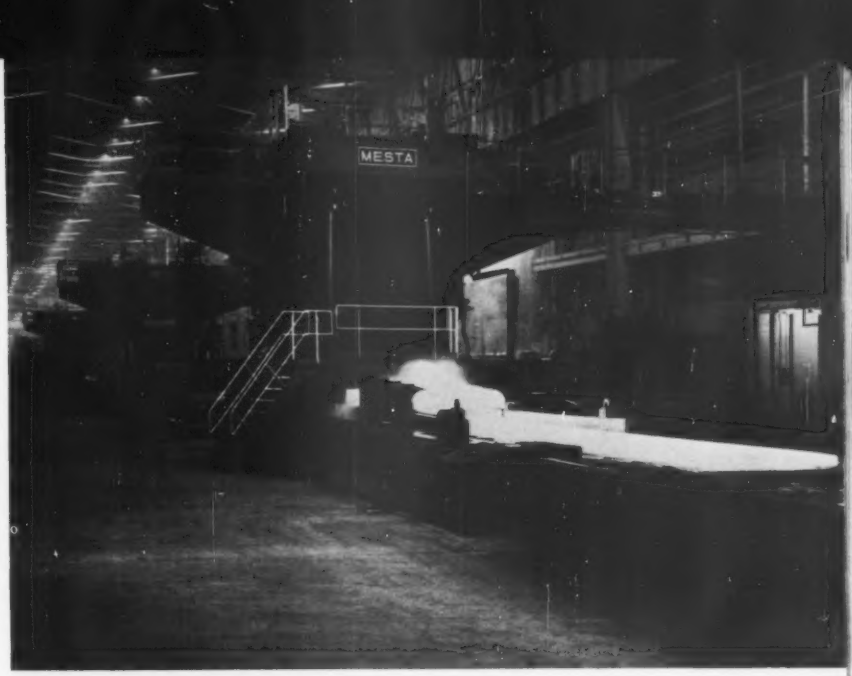
This is not to say that the problems of the steel industry have been erased. Steel executives are still crying because the unit costs of making a ton of steel are still higher in the United States than any other country in the world. Steelmakers—especially specialty steel manufacturers—are still smarting from the slap at the industry made by foreign steel producers who bit off 18 percent of the U.S. domestic market last year.

Huge outlays for pollution abatement facilities and their maintenance eat into profit margins and show no production results, and productivity figures through government statistics indicate domestic steelmakers have had their historic advantage in this area considerably narrowed by Japan and European countries.

The productivity measures, reported by the Labor Department's Bureau of Labor Statistics, reflect the relationship between output in real terms and related labor time. BLS defines these measurements as showing the changes from year to year in the amount of labor time required to produce a unit of output. These output per man-hour figures reflect the joint effect of a number of interrelated influences as well; such as, changes in technology, capital investment per worker, changes in level of output, utilization of capacity, layout and flow of material skill and skills and effort of the workforce.

BLS cautions, however, that these figures *do not* measure the specific contributions of labor, capital or other factors of production.

Looking at BLS figures, over the last five years there has been practically no increase in productivity in the steel industry. In fact, output per man hour increase between 1965 and 1971 averaged only 0.5 percent, compared with an average increase of more than 4 percent in the previous five years. The increase for 1970-71 was 3.2 percent due to the sharp decline in employment.



MODERN TECHNOLOGY—*Hot slab enters roughing stand at Republic Steel Corporation's Cleveland, Ohio, plant. This example of modern technology at work to increase productivity is found throughout Cleveland facility and other U.S. steel mills.*

Steel industry leaders, however, feel that the U.S. industry has had stronger productivity increases than shown by these indicators. Lewis W. Foy, president of Bethlehem Steel Corporation, points out that while labor productivity is an important factor in the productivity equation, it is "not by any means the only one."

Possible pitfall

Foy indicates that failure to recognize the many factors involved can be one of the pitfalls of attempting to measure true productivity. He quotes Dr. John Kendrick, professor of economics at George Washington University and chief economist of The Conference Board, who said, "Only if output rises faster than all real costs can we say there has been an increase in productivity efficiency."

Foy suggests, "What we ought to be talking about is 'total productivity' or 'total productive efficiency'." He also points out that the number of man-hours worked per ton shipped is still the lowest in the United States. "According to the latest figures we have," Foy said, "the U.S. industry uses just over 11.5 man-hours per ton of shipments compared with about 12 in Japan and 14.5 in West Germany."

DIRECT REDUCTION UNIT—*An aerial view of Armco Steel Corporation's new direct reduction unit at its Houston works shows piles of iron ore pellets beside conveyor and the barge unloading dock in background. Pellets will be automatically conveyed to the top of the shaft-type furnace. Oxygen is removed as pellets move down shaft and the metallized pellets are then conveyed to storage area.*

Looking at 'total productivity' for the industry, it could include more measurements. Among other factors a new definition could include Product improvement, Raw materials flow and cost, Order volume, Domestic output growth, Union-management relations, Cost reductions, Tonnage capacity of U.S. mills, Inventory levels of steel users, Voluntary restraint programs on steel exports to the U.S. from foreign countries, Iron ore reduction improvements, Tests, research, new plants and equipment—all equaling a Yearly production increase.

Steelmakers do admit there is a productivity problem, but it is one that is being worked on both by management and labor. The last contract signed August 1, 1971 with the United Steelworkers Union provided for labor-management committees to be set up at plant levels, so that individual steel plants could have their own committees working on their own particular productivity problems.

Many of these committees are just beginning to form, but others have been organized and begun their task. C. William Verity, Chairman of Armco Steel Corporation, told a press group recently that the union "has shown a very unusual willingness to work constructively with management since they now realize that our industry has suffered greatly because of some of the inefficiencies built into our plants, and if we are to maintain employment at its present level or increase it, we must eliminate these inefficiencies."

Verity added, "Of equal importance is the changed attitude of many of our people who now are much more interested in eliminating waste, improving yields and taking pride in their product. . . . These changed attitudes will result in increased productivity."

Verity also said that "productivity in the steel industry is now again on the increase after a period of almost three years of no increase and, in some cases, a down trend. The steel executive pointed out that in the past ten years the American steel industry has invested close to $20 billion dollars in new facilities and improvements. The purpose of these expenditures, according to Verity, has been to utilize the newest technology developed any place in the world in new facilities built to replace older facilities, to reduce cost, to improve yields and to provide additional capacity in those products which showed growth for the years to come."

Improvement effort

The effort to which the Armco head refers is for the most part now completed. "Completion of this program," he said, "means that American Steel mills are as efficient as any in the world, with the exception of the two most recently completed plants in Japan, and that the industry is now in a position to benefit from the efficiencies and new technology built into its plants."

Edwin H. Gott, Chairman of U.S. Steel Corporation and Chairman of the American Iron & Steel Institute, explains that the investment in new steel facilities over this six-year period has been wise. "It has enabled the American steel industry to double its ability to produce raw steel by the basic oxygen method, so that today, we have 85 million tons of installed basic oxygen steelmaking capability—or about a fourth of the world's total."

During that same period, the U.S. domestic steelmakers doubled their ability to produce steel in electric furnaces, to about 30 million tons. Said Gott, "That is almost twice the capacity of the country in second place, which is Japan with 17 million tons."

The industry can now also boast of having a fourth of the world's high volume continuous casting capacity, 90 percent of the world's vacuum-melted steel capacity, and an

ability to produce stainless and other alloy steels by the new argon-oxygen method that is double the capacity of all the rest of the world combined.

The domestic market for steel in this country is the largest in the world. In fact, a recent study by the International Iron and Steel Institute shows that annual steel consumption in the U.S. has been averaging between 25 and 60 percent greater than the amounts of steel being consumed in foreign countries, such as Japan, Russia and all of the Common Market countries combined.

Steel needs orders

Steel in the United States invested billions of dollars in new equipment, but, with steadily rising costs, it has needed larger volumes of orders in order to increase its productivity. Instead, U.S. consumers have been importing more and more foreign-made steel, and the mills in this country do not have the orders to allow them to work up to full capacity.

Looked at another way, the 18 percent chunk of the U.S. steel market that went to foreign producers last year could be equated to a loss of thousands of domestic jobs in the steel industry here at home.

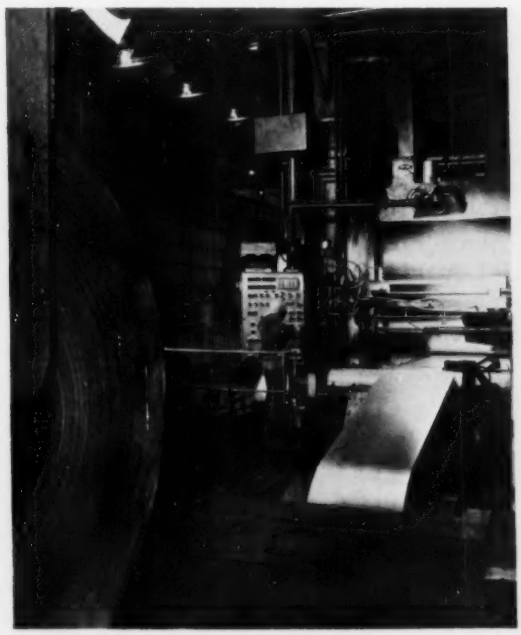
In May of this year, Japanese, European Common Market and British steelmakers agreed to voluntarily limit their exports of steel to this country through 1974, limiting the total tons to be shipped to the U.S. in 1971, with a growth rate of 2.5 percent year-to-year for 1973 and 1974.

The arrangements also include a drop in tonnages of alloy, stainless and tool steels that will come into the country, and an attempt is also being made to limit imports of cold finished bars and fabricated structural steel (these were not included in the old voluntary restraint arrangements).

Even so, these arrangements worked out between the U.S. government and foreign producers do not reach into all countries exporting steel to the U.S. Canada, Sweden, South Africa, certain Latin American and other countries which have been increasing their exports to the U.S. are not covered.

And as steel imports increased, steel exports from the domestic industry decreased. In 1971, American steel exports fell 61 percent from the abnormally high level of 7.1 million tons in 1970 (a result of the world steel boom), to 2.8 million tons. Some improvements are anticipated for 1972 in the Nation's steel exports.

With the new voluntary restraint program in effect, however, it is expected that the level for steel imports this year will probably be about 17 million tons, down 7 percent from last year's figures. Even with this decrease, the trade deficit being experienced in steel will not be significantly affected.



STEEL PRODUCTIVITY—*At right, an air-conditioned pulpit houses controls for mill. Steel is rolled under full computer control in today's modern steel plants. At left, cold rolled steel enters temper mill.*

Pace Of Economic Push Is Full Speed Ahead

Leading Indicators Show Strong Uptrend, Economy On Track To Expand Through 1973

"We've got a genuine broad-based, major economic expansion under way," Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, asserted in reviewing "the strong uptrend in the leading indicators."

"And, based merely on historical precedent," the Commerce Department's economic analyst continued, "I would think the expansion would last at least three years." The expansion started in late 1970.

Commenting on the July Advance Business Conditions Digest, which shows that the composite index of leading indicators is continuing to signal strong economic expansion in the months ahead, Dr. Passer noted that only one expansion since World War II has lasted less than three years.

"This means to me that the economy is on track and that it is going to go ahead at a good pace for not only the rest of this year, but for the next year as well," he asserted further.

Passer said that a major difference in the behavior of the leading indicators in this expanson is that the rise occurred with only nine of the 12 showing strong expansion. In previous cycles, all 12 went up.

Inventory situation

"We haven't had much help so to speak from inventories, initial claims for unemployment insurance, and the price-labor cost ratio," he explained. "Inventories have been skinny and there hasn't been any major accumulation so far. Claims for unemployment are inverted, of course, in the index. The price-labor cost ratio has been held down by the wage-price control program which has restrained prices more than wages."

Because housing and consumer installment credit have been particularly strong, Passer said he would not look for further strength in those two series.

However, if the leading indicators did continue to go up at quite a strong pace, it would be an indication that the expansion would be likely to continue beyond, he added.

For the second quarter, the index registered a 4.2 percent gain, the strongest performance since early 1971 when the economy was recovering from an automobile strike.

Index increased

The index increased 0.5 percent to 142.5 in June, and there was an unusually large upward revision in the amount of the May increase—from 0.2 percent to 1.4 percent, Dr. Passer noted.

He explained that the large upward revision in May was due primarily to strong favorable movements by three series that were not available when the preliminary index was announced. These were consumer installment credit, net change in inventories and net business formations.

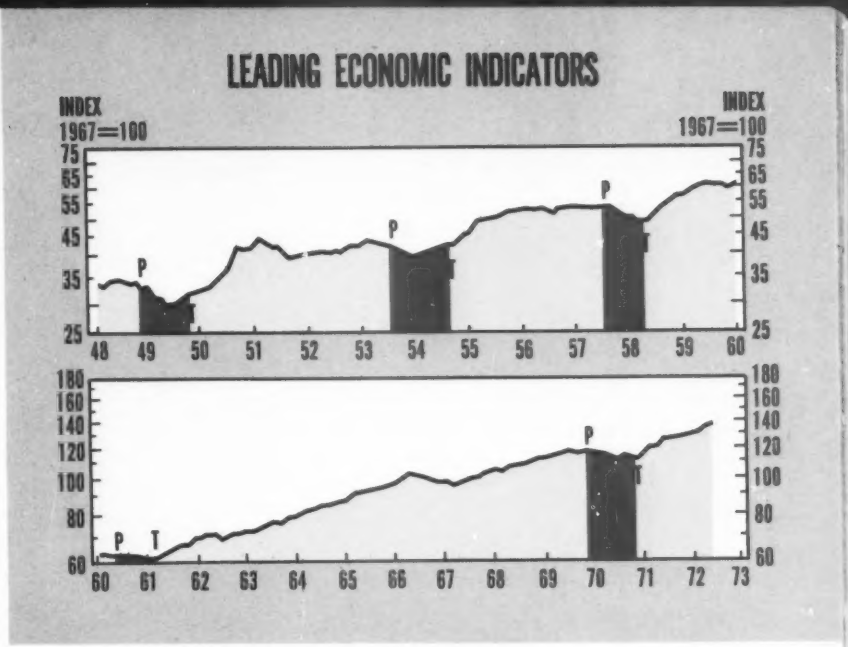
In a longer-run perspective, Dr. Passer continued, the sustained uptrend in the index —a 25 percent increase since the low point 20 months ago—indicated the present upswing in the economy is an expansion that will continue at least three 1973.

Noting that the index has traced a pattern that is remarkably similar to its typical performance in the four expansions since World War II, Dr. Passer said "in all four past recoveries the composite index has leveled off and declined slightly after rising for a year and a half, even though the economy continued to expand."

"Thus, even a leveling or a slight dip in the next several months would not alter the forecast of continued growth in the economy at least through 1973," he concluded. "The pattern of the indicators over the remainder of 1972 and 1973, however, will provide a guide to the strength of the expansion in the economy in 1973, and the prospects for continuation of that expansion beyond 1973."

Analytical reasons for believing expansion will continue in 1973, Passer pointed out, include the fact that "we haven't had any help yet from the trade balance."

"It is reasonable to expect some improvement, although maybe it will be gradual," he said, adding that the realignment of currencies last December should begin to have some impact, and "I think you can see it already on some individual products such as imported cars and television sets."



HARBINGER OF THE ECONOMY—*In business cycles since 1948, the composite index of leading indicators shows a tendency to rise strongly in the first year to 18 months of an expansionary period (lightly shaded areas), and then level off or decline, even though the economy continues to advance. P indicates the peak of an expansion and T indicates the trough, or low point. The vigorous uptrend in the index over the past 20 months establishes the current upswing as a major expansion that should last at least through 1973. In the next few months, the pattern of the index should indicate the strength of the expansion in 1973 and whether it is likely to continue beyond 1973.*

Major trading partners

Of course, the fact that some of the economies of this Nation's major trading partners have been sluggish and are now showing more strength means that the market will expand for U.S. products, he declared.

"We should get some help from the trade balance the remainder of this year and, of course, through next year," he added.

Another point, Dr. Passer emphasized, is the likelihood of further gains in plant and equipment spending. He said this year's increase is "one of the best in real terms that we've had in some time, but manufacturing has not shown a strong rise."

"As the economy continues to expand, as industrial production continues to increase, and as the rate of capacity operation continues to rise," Dr. Passer concluded, "it seems to me that the conditions will be laid for a considerable step-up in capital spending by manufacturers."

Nation Encourages Its Inventors, Innovators As Valuable Resource

Special Office Smooths Path To Marketplace For People Of Ideas; Inventor Council Advises

How different would be the role of the United States in the international marketplace today without the inventive genius of Edison, Franklin, McCormack and Bell, and the innovative industrial muscle of leaders like Ford and Land.

Fortunately for the nation, invention and innovation continue to be important national resources and ones which are of growing interest to the Federal Government.

Before anyone can break a bottle of champagne over its bow and launch it, a new invention faces many trials. It may be something the world has been waiting for, but the world must be convinced. If the progression from drawing-board to working model has been long and harrowing, even harder work may still lie ahead as the inventor sets out to market the idea.

For years, a special Office of Invention and Innovation (OI&I) within Commerce's National Bureau of Standards has been concerning itself with the problems and the struggles of unknown numbers of citizens who pursue invention as a way of life or a part-time obsession. For the independent inventor, and for those who work in big-company "think tanks," OI&I offers inventors a variety of services:

- Refers inventors to appropriate agencies;
- Works to establish programs and policies conducive to invention and innovation;
- Helps to plan and sponsor state and community meetings and expositions for inventors and entrepreneurs;
- Works with colleges and universities on improved methods of education for innovation;
- Conducts studies and analyses of the

psychology of invention and the inventive process;

• Cooperates in innovative programs keyed to economic development in other parts of the world.

The people of ideas for whom the OI&I was created are found in every walk of life: the farmer who invented a plow that rides over rocks; the university professor who developed his own magnetic flux sensor for use in the classroom solution of scientific problems; the housewife who contrived a baby's safety seat of plastic-coated fabric designed to slip easily over the back of a chair; the hospital employee who devised an aluminum support to hold a patient's arm straight out as he lies on the surgical table; anyone with a new and novel idea or gadget.

The Office of Invention and Innovation officially goes back about 31 years but its inspiration is traceable to examples set by inventor-statesmen like Benjamin Franklin and Thomas Jefferson, who, when not personally creating useful contrivances, were recruiting other inventors to get things rolling. In their correspondence and conversation, these founding fathers often urged talented friends and acquaintances to come up with a variety of new devices that would benefit the community and strengthen the nation.

A century and a half later, when Hitler was beginning to rule the Atlantic, torpedo interceptors and various other missiles and countermissiles were on a high-priority list of sought-after devices. The Secretary of Commerce organized the defense-minded National Inventors Council, precursor of the Office of Invention and Innovation, in the summer of 1940. In no time at all some 250,000 ideas had been submitted.

Treasure hunting

These included several thousand concerned with a "a net or screen to protect ships against torpedoes," not one of which clicked because vessels had to remain fast and maneuverable even in heavy seas. Cumbersome protective apparatus simply would not do. One was a treasure-hunting device—invented for people seeking buried pirates' gold along the Florida Coast and keys—applied as a mine detector to save many lives. The mercury dry cell, a new kind of battery half as big and five times as durable as available batteries, was introduced by a New Rochelle, N.Y., inventor for wartime purposes and later found many peacetime applications. A California garage mechanic and scoutmaster offered a signalling mirror he had developed for his Boy Scout troop, which was transformed into a device later carried by all military flight personnel as a rescue-at-sea instrument. An Indiana inventor designed a finger-operated spark generator from which the trigger generator of the bazooka was derived.

INVENTORS EXHIBITION — *Convertible tractor and endless tractor track is demonstrated at a Green Lake, Wis., inventors exhibition. Through its Office of Invention and Innovation, Commerce's National Bureau of Standards cosponsored and helped plan the exhibition as it does in a majority of the states.*

Bands of school children were sent scouring the countryside for milkweed after a civilian scientist discovered that its floss would effectively substitute for kapok supplies that the Japanese had cut off from the United States; the Navy contracted for a million pounds of processed milkweed floss from a plant set up in Michigan, and the new commodity not only provided warm lining for aviators' clothing, stuffing for life preservers, insulation and sound-proofing materials, but it also yielded a vegetable oil comparable to soybean oil.

A leading newspaper saw in the "flood tide of invention" promise that "with the will to make it so, the post-war world can benefit enormously from application of the same creative genius." This was a sentiment shared by the Secretary of Commerce and the dollar-a-year experts on the National Inventors

Council, who contributed their time and talents.

At first, the mission of the Council was to make sure that the war was waged with every inventive resource from "toothpicks to tanks." Later, they worked for broader peacetime objectives. By the 1960s, it was entirely in character for the Council—with the President's Committee on Employment of the Physically Handicapped—to cosponsor a prize competition for a stair-climbing wheel chair. The competition attracted hundreds of designs including three $1,000 preliminary award winners and a $5,000 grand prize winner.

Today's Council is located at NBS Gaithersburg, Md., headquarters, where it continues to serve as the uncompensated national advisory body of distinguished leaders from business, industry, technology, law and education. NBS provides the Commerce Department's professional staff for the invention/innovation program, now directed by Jacob Rabinow, the well-known inventor and entrepreneur, who serves also as chief research engineer of the Bureau's Institute for Applied Technology.

From its Federal vantage point, the Office of Invention and Innovation is close to the technological needs of government agencies. OI&I is a helpful resource regarding what to invent and for whom to invent, and it is something of a marriage broker as between inventors and entrepreneurs. A major device for performing the necessary "introductions" is the annual inventors exposition or show, currently cosponsored by OI&I and state and community leaders in about three-quarters of the states.

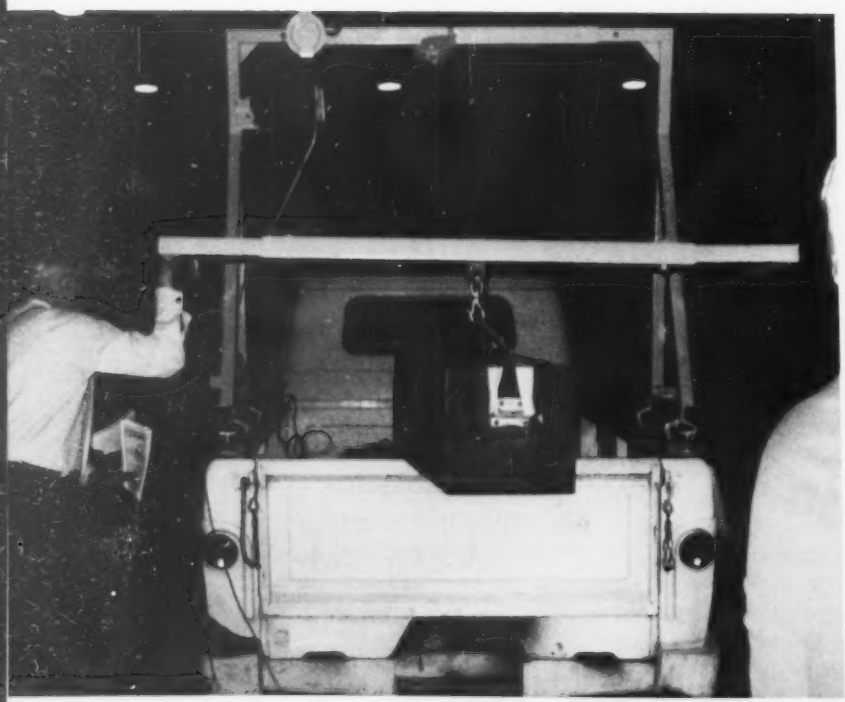
Evidence in OI&I files demonstrates eloquently that the brains and gumption to break new technological ground are not a monopoly of any particular age or class of the population. Consider, for example, this note from an exposition official a few years ago:

"Mr. Wallace A. Clay sold his Stereoscopic Panorama Displayer for $25,000 plus royalties. He is better than 80 years old, and . . . he had spent 26 years developing and promoting his invention without success. The Utah Invention Exposition apparently turned the trick."

Youngsters, too, are scoring breakthroughs. Students are being enlisted in engineering "case design" programs undertaken by various colleges with OI&I encouragement and cooperation. Working on real problems (pollution, traffic congestion, fire prevention, etc.), they strive for real solutions—like the students who designed a prize-winning water purification system and those who marketed an acoustic telephone coupler that converts an ordinary electric typewriter into a teletype machine. For inspiration, students may have had in mind the image of Philo T. Farnsworth, the 16-year-old high school boy who, a half-century ago, conceived one of the basic principles of television.

The hand of the inventor may be supple and young or gnarled by age. But that does not matter so long as the brain is acute and the spirit daring. Like a traveler brushing off the admonition, "you can't get there from here," the true inventor will press on toward his goal. For many, the route may be marked out more clearly by making contact with the Office of Invention and Innovation, National Bureau of Standards, TECH B-140, Washington, D.C., 20234.

—National Bureau of Standards



TRUCK-LOADER—*A new truck-loader design is demonstrated at a Lewiston, Mont., inventors congress cosponsored by the National Bureau of Standards through its Office of Invention and Innovation. Such invention and innovation is of continuing interest to the Government which encourages independent inventors as well as those who work in big-company "think tanks."*

U.S. Containerships Inject Momentum Into Puerto Rico Economy

Caribbean Isle Is Developing Fast As Result Of American-Flag Merchant Marine Trade

Laid end to end, the number of containers traveling the ocean trade route between the United States and Puerto Rico would form a line more than 30 miles long.

Thousands of containers

More than 4,300 containers are involved in this U.S. domestic shipping transaction weekly, and this number continues to grow. And 100 percent of the containerships used to transport these containers are U.S.-flag vessels.

Trade has always been invaluable to the economic growth of a developing area and the example of what has happened in the Commonwealth of Puerto Rico is no exception. The containerization revolution, begun in that Caribbean Island in 1958, has had a strong influence on its booming development.

Just 14 years after the introduction of container vessels in the U.S.-Puerto Rico trade, this island, just twice the size of Connecticut, stands only behind Japan and Israel in economic growth worldwide.

ENTERING HARBOR—*A Transamerican Trailer Transport, Inc., ship is shown coming into the harbor at San Juan, Puerto Rico. The ship represents a new shipping boom for U.S.-Puerto Rican trade.*

TO ISLAND DESTINATION—*A Sea-Land container aboard a truck is enroute to its final destination in Puerto Rico. Sea-Land inaugurated the container shipping revolution on the Caribbean isle.*

In 1958, the beginning container shipping investment in the island was $15 million. It has grown to $250 million today and is expected to exceed $350 million by 1977. The very first year of container traffic on this route, in fact, an average of 226 containers traveled it weekly.

Container impact

Today each time a container arrives in San Juan it pumps $900 into the Puerto Rican economy. With more than 2,500 containers arriving weekly, on an annual basis, this means the carriers in this trade have a $100 million impact on the island.

Four of the major carriers that fly the American flag on this route have invested $250 million in the trade, giving Puerto Rico the finest ocean service and the most frequent sailings on a per capita basis of any part of the world.

Jobs attributed to the container trade have grown from 90 persons on the payrolls of the American-flag companies in Puerto Rico in 1958 to more than 1,000 today—generating an approximate annual income of $8 million. And, directly and indirectly, more than 14,000 other jobs have been generated on the island in total by the container traffic.

In the last five years alone, the gross product of Puerto Rico has grown 53 percent, exports have risen 36 percent and imports, in general, have increased 60 percent.

Bank accounts have risen nearly 100 percent and the per capita income has grown by 47 percent—making the people of Puerto Rico the highest paid on a per capita basis in all of Central and South America.

The 2,000 U.S. affiliates now on the island explain the $1.7 billion worth of exported goods to the mainland, and Puerto Rico's annual purchases of $2.5 billion in mainland goods make the commonwealth the fifth largest customer of American goods.

The Governor of the Commonwealth, Luis Ferre, notes that in Puerto Rico "the economic development is a shining example of what can be accomplished by free enterprise in a democracy."

The people and the government of Puerto Rico deserve credit for their economic miracle—and the carriers in this trade have helped in making a meaningful and measurable impact.

Shipping revolution

Sea-Land Service inaugurated the container shipping revolution in the Puerto Rico trade—followed by Seatrain Lines, Gulf-Puerto Rico Lines, and Transamerican Trailer Transport, which introduced large-scale pure roll-on roll-off shipping to the island and to the world.

In addition to container-ships and ro-ros, ocean tug barges, a new concept in ocean shipping between the U.S. and Puerto Rico, are becoming a familiar sight in the island's harbors.

These ocean tug barges are used to carry raw materials to the island, and to return finished products to the mainland.

The Commerce Department's Maritime Administration has two assistance programs that directly benefit operators in this trade. The Title XI Mortage Insurance Program—under which the agency insures commercially placed ship mortgages and bonds—is open to shipping lines in the Puerto Rican trade, as is the Capital Construction Fund Program, which enables operators to accumulate the capital necessary for new ship construction on a tax deferred basis.

Actually, the phenomenal growth of Puerto Rico began 25 years ago when a tax exemption program was introduced to attract mainland industry to build manufacturing plants there. For the first 10 years of this plan, the trade was served by slow-moving conventional break-bulk vessels.

Ocean transportation, as introduced in

1958, served as an important factor in the decision of many companies to establish affiliates in Puerto Rico. Raw materials had to move swiftly southbound and finished products had to be rushed to the mainland marketplace.

Malcom McLean, founder of Sea-Land, saw a basic need: a transportation system to serve a growing industrial site having the huge potential combined with a stable government. And in 1958, the first Sea-Land Service containership came to San Juan.

More lines added

Five years later, Seatrain Lines entered the trade and shippers benefited from an alternative and competitive service. And five years after that, in 1968, Transamerican Trailer Transport brought another shipping revolution to Puerto Rico—the world's largest and fastest pure roll-on roll-off trailerships.

TTT's successful performance with ros-ros is seen as an encouraging sign by maritime observers that the U.S. Merchant Marine can be revitalized to meet the challenge posed by a fast expanding and highly competitive foreign-flag fleet.

Major carriers

Four carriers in the $4 billion Puerto Rico trade—Sea-Land, Seatrain, TTT, and Gulf-Puerto Rico Lines, a division of Sea-Land—provide a full-range of lift-on and roll-on containerized transportation, plus an ability to carry any size cargo that rolls on American roads and rails.

To make this service even more efficient, the Federal Maritime Commission mandated the formation of the Puerto Rico Ocean Service Association—a prototype of shipping associations to come.

The purpose of PROSA is to conduct a continuing dialogue between U.S. carriers and shippers and to serve as a problem-solving —rather than rate-setting — association. PROSA holds public meetings in New York and Puerto Rico where shippers and carriers, as well as those in allied transportation industries in the United States, can air their grievances.

At one meeting in New York this spring, a cosmetics manufacturer from the midwest with a shipping problem made contact—right across the table—with a trucker from the area who had a solution. With such problems eliminated, the economic development of an area can continue to grow and thrive.

Fierce competition

The fierce competition that exists between the four carriers re-emerges at these public meetings, as each company gets an opportunity to discuss what it is doing in the trade that is new.

For example, Sea-Land and Seatrain can boast of new ports added to the already long list of areas they serve. No port is too small to either of these lines, and if more have to be opened to properly serve the island, the economy, and the trade, they will do so.

Transamerican Trailer Transport is also

SEATRAIN—*The second major carrier to use containerships on the U.S.-Puerto Rican trade route was Seatrain. Containers are shown in the loading process in the Puerto Rico container yard.*

LOADING IN PROCESS—*A Seatrain container is hoisted high in the air in the process of moving from ship to loading dock to truck in the revolutionary new cargo transportation industry in Puerto Rico.*

pushing ahead with new developments in this trade. TTT recently announced that its third ship, now under construction in an American yard, will serve a Baltimore to San Juan trade route—a new service from Maryland. Gulf-Puerto Rico is also putting new equipment and more modern vessels on its routes from the Gulf Coast ports to the island.

PROSA chairman

Hiram D. Cabassa, a noted Puerto Rico industrialist and former president of the Puerto Rico Manufacturers Association, is chairman of PROSA.

Cabassa points out, "As a businessman in Puerto Rico, I have seen my small island emerge economically. I attribute much of this growth to the American-flag merchant marine and the fine contribution the U.S. containerships have made in helping us 'move' ahead."

READY TO MOVE—*Containers at Sea-Land facilities are ready to move. The revolution in the containership industry, begun in 1958 on this Caribbean island, has given Puerto Rican economy a shot in the arm. More than 4,300 containers are involved in this domestic shipping transaction weekly.*

DOMESTIC BUSINESS REPORT

- **Offshore island could be practical solution**
- **Main data unit may emerge from SESA**
- **Five-city survey looks at Nation's housing**
- **More minority aid from resource centers**
- **Flood victims warned about disaster chasers**

Ocean Isle One Answer To Energy Crisis

An offshore deepwater terminal seems to be the "one practical solution" to this Nation's steadily mounting need for imported crude oil and "is vital to our ability to meet growing energy requirements," says Robert J. Blackwell, Assistant Secretary of Commerce for Maritime Affairs.

Blackwell's comments were made in announcing the results of a year-long study by the New York engineering firm of Soros Associates, Inc., for the Maritime Administration.

Construction of a 200-acre deepwater terminal off the Delaware coast, the study concluded, would:

- help the Nation meet its need for imported crude oil,
- prove economically competitive with current alternatives,
- offer advantages in improved environmental protection, and
- minimize ship traffic congestion.

Estimated to cost $499 million to build, the artificial island would be located about 8.5 miles East of Cape Henlopen, Del. The proximity of this location to existing industrial and refining facilities minimizes transshipment costs and permits maximum utilization of these facilities without encroachment on present recreation areas for new industrial facilities, the study showed.

Consumption to double

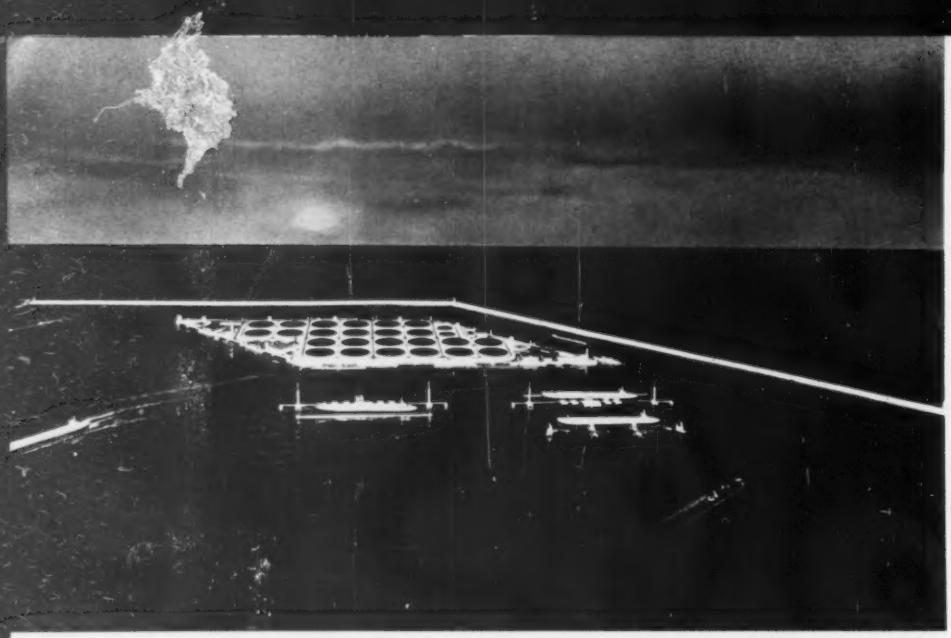
"Numerous studies by both private industry and the government clearly indicate that U.S. consumption of energy will more than double in the remainder of this century," Blackwell explained. "Much of this increased demand will be for petroleum and its products."

"Yet, because domestic energy production will remain essentially constant through this period," he continued, "we will have to depend increasingly on foreign sources for the oil we need to maintain our standard of living."

Noting that importing this oil economically requires the use of mammoth tankers, exceeding 200,000 deadweight tons in size, Blackwell asserted that "the economies of scale in oil transport are such that even after allowing for terminal and transshipment costs, increasing tanker size from 65,000 tons to 326,000 tons could reduce the overall transportation cost per ton of oil from about $9.93 per ton to $7.42 per ton."

This is a savings of more than 25 percent.

"Considering that we are talking about importing 200 million tons of oil annually through North Atlantic posts by 1980, these savings can amount to about a half billion dollars a year at that time," the Maritime Administrator pointed out.



IN NORTH ATLANTIC—*An artist's rendering of a proposed artificial island off the coast of Delaware. The deepwater oil terminal would relieve pressing energy needs in the North Atlantic area, says a year-long study on the proposed project.*

But the United States is prevented from capitalizing on these economies now because depth limitations in East and Gulf ports restrict them to handling tankers of at most 80,000 tons.

"Where we need the oil the most," Blackwell said, "on the East and Gulf coasts, we cannot get it in these massive tankers because we do not have the 60 to 100 feet of water required to accommodate them."

Alternative solutions cited by Blackwell included dredging existing channels, using single-point mooring systems at sea, or using shallow-draft tankers. He added that all these possibilities suffer serious constraints, physical limitations affecting the ability to meet the forecasted requirement economically.

Blackwell called the offshore terminal the one practical solution.

The Soros study concentrated on the U.S. North Atlantic coast because of the greater, more immediate need for imported oil in this area, although the study notes that the Gulf Coast will not be far behind in requiring a deepwater terminal for mammoth tankers.

As envisioned by Soros, the Middle Atlantic deepwater terminal could be built in three stages—an interim terminal, a first-stage terminal and a second-stage, or more fully developed, multi-purpose terminal.

Interim terminal

The interim stage terminal would consist of an island of about 100 acres, protected from ocean waves by a dog-legged breakwater about 11,500 feet long. It would contain two berths for tankers of up to 350,000 tons, and six shallow-draft berths for feeder vessels of 30,000 to 60,000 tons. These would service refineries in the New York-New Jersey area and along the Delaware River. Alternatively, a pipeline could be used in place of feeder ships.

The annual throughput for this interim-stage terminal of 100 million tons would be increased to 200 million tons per year in the first stage of development.

The first stage terminal would have an area twice the size of the interim stage project, and all facilities for ships would be doubled.

In the second, or final stage, the terminal would be enlarged to 500 acres. The breakwater lengthened by 7,500 feet. In addition to handling a throughput of 300 million tons of oil annually, the terminal would be able to handle dry bulk commodities—such as iron ore and coal. In this concept, the terminal would consist of six deep-draft berths for tankers, two deep-draft berths for dry bulk carriers, and 13 shallow-draft berths for feeder operations.

The study concluded that the interim stage terminal would cost $499 million while the stage one terminal would cost an additional $288 million and the second-stage terminal an additional $531 million.

Some of the pollution-control features included in the Soros design, he said, include containment booms that would be placed around each berth, spillways on the island to control spillages from storage tanks, and a facility for treating oily water and waste, including ballast water. Advanced traffic control and collision avoidance systems would also be used to protect the ships and the environment.

"This terminal would be as pollution-free as modern technology will allow," the Assistant Secretary stated.

In addition, he said, the location outside of Delaware Bay was selected for this study's analysis because accidental spills in the open ocean are not as dangerous to the fragile marine life systems as those which occur in protected waters.

To emphasize this point, Blackwell noted that the U.S. Coast Guard considers that oil spills in the ocean must be ten times greater than those in close-in waters to warrant the same degree of concern.

Blackwell stated that the Soros report fills an important need by providing interested parties with data on using the offshore-terminal approach to alleviate the nation's energy crisis economically.

Copies of the detailed study by Soros Associates will be available from the National Technical Information Service, Springfield, Va., in about six weeks.

—*Maritime Administration*

HOUSING QUESTIONS—*A census taker at right chats with an urban housing dweller during a recent five-city survey which will produce in depth information to provide new methods of measuring the quality of the Nation's housing.*

Five-City Survey Will Develop Nation's Housing Need Concept

The Bureau of the Census has embarked on a program to provide new methods of measuring the quality of the nation's housing. A new perspective is needed because of rapid improvement in housing over the past several decades.

The mere presence of plumbing, for example, has been used as a major test in determining whether a housing unit was "substandard." The general level of housing has improved so much, however, that almost all units now have plumbing, and new standards are required to determine the nation's housing needs.

Questions dealing with home comfort, safety and dependability, as well as standard census questions on housing and population are being asked of housing residents in five cities of the United States. The queries are being made to develop an up-to-date basis for determining what constitutes substandard housing (including the nature of the neighborhoods in which such housing exists as well as the structure).

The survey is a joint Federal-private effort. The National Association of Real Estate Boards, the National Association of Housing and Redevelopment Officials and private consultants are cooperating with Commerce's Bureau of the Census, the Department of Housing and Urban Development, and the Office of Management and Budget in carrying out the field operations for the investigative effort.

Workers conducting the 1,800 personal interviews are armed with a questionnaire of some 60 questions dealing with the various aspects of population, housing and neighborhoods. An attempt is also being made to obtain information about the characteristics of the people living in the housing. Questions are being asked about the residents' attitudes toward adequate housing and what they think makes a good home.

In addition to these questions, interviewers are gathering data based on their observation of the characteristics of the neighborhood, such as the number of fire hydrants, the adequacy of street lights, the condition of the streets, and the prevalence of boarded-up buildings in these neighborhoods.

The starting point of the survey was Trenton, N.J., where collection of data was completed by July 8. Two other city-surveys have been finished: Chicago, Ill., July 9-22, and Memphis, Tenn., July 23-Aug. 5. The collection dates for Brownsville, Tex., are Aug. 6-19, and for Portland, Ore., Aug. 20 through Sept. 2.

Two stages

Information is being collected in two stages. The first phase is an exterior inspection of 360 buildings in each city, made by three-member teams of senior professionals from the agencies and private groups cooperating in the project. This inspection includes observations of aspects of the environment and neighborhood such as inharmonious land use, density of traffic, and evidence of potential hazards.

The second stage consists of household interviews conducted in these same buildings by specially-trained workers. The buildings are located in sample blocks selected on the basis of the statistics gathered in the 1970 Census.

The areas in these five cities were selected to provide a representative sample of the nation's housing, based on characteristics of the occupants, such as income, and sale or rental value of the property. Thus, the survey is designed to produce criteria which can be appropriately applied throughout the nation in determining whether a housing unit is substandard. Five individual and family income levels are represented.

The information will be used, in part, in developing questions for use in a new annual housing survey, to be sponsored by the Department of Housing and Urban Development, expected in 1973.

Both the current and subsequent surveys have been instituted to give many governmental agencies at all levels, as well as non-governmental bodies, adequate and reliable information concerning the extent of problems in neighborhoods and housing, long recognized as needed by both sources.

DISCUSSING PROCEDURES—*Selma Kunitz, participant in a panel at the Social and Economic Statistics Administration operations seminar, discusses "Management Information Systems—A Look at Budgeting Procedures in Fiscal 1975."*

Agency May Become Main Data Unit In Government

The Commerce Department's Social and Economic Statistics Administration logically would form the core statistical unit of the proposed Department of Economic Affairs.

This assertion was made by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, at a seminar in Easton, Md. late last month. SESA, formed last January 1, includes the Bureau of the Census and the Bureau of Economic Analysis, formerly known as the Office of Business Economics. Dr. Passer is Administrator of SESA and Joseph R. Wright is Deputy Administrator for Management. Dr. George Hay Brown retained his position as Director of the Census Bureau and Dr. George Jaszi continued as Director of BEA. The seminar was called to discuss experience over the past six months under the new agency and plans for its future.

The statistical unit of the new Department of Economic Affairs would be the Federal Government's main statistical agency if Congress approves President Nixon's Government-wide reorganization plan.

SESA is the Government's largest data-producing agency, and Dr. Passer said he "is convinced that more statistical activities will be moved into SESA if the agency can continue to produce high-quality data on a broad range of subjects."

He said the efficiency and potential effectiveness of the Department's statistical system had been enhanced by the creation of SESA, but he also emphasized that the separate identities of BEA and Census should be maintained. Speaking to about 70 top officials of SESA, Dr. Passer said, "Both have a long tradition of accuracy, integrity, objectivity, and efficiency. Census, of course, had its beginnings at the very roots of the republic—and it has grown into a multi-purpose statistical agency. The 50th anniversary of the Survey of Current Business (published by BEA) last year serves as a reminder that BEA also is acquiring a little age. Both agencies have enviable reputations and we want to maintain them and build on the past."

Data-collection agency

Census generally is a data-collection agency although it analyzes population and related subjects, while BEA analyzes economic data and produces major economic series, such as Gross National Product.

Julius Shiskin, Chief Statistician in the Office of Management and Budget, indicated that there was some competition among Government statistical agencies and that, in effect, a project was assigned to the most efficient agency, provided that it also could handle the subject matter.

Shiskin, who at one time supervised the processing of the economic indicators in Census, said the most important issue in regard to statistics is maintaining their integrity. He said that both the quality of the numbers and their credibility had improved over the past three years.

He said the "one-hour rule" had worked well. Under this rule, political appointees are precluded from commenting on a statistical report until one hour after it has been released to the news media. "The length of time is not important," Shiskin said, "it is the principle that is important. We want everyone to realize that the statistics are compiled by professionals who are not politically oriented."

He said he did not know of a single violation of the rule after President Nixon sent a memo to cabinet officers urging them to make sure that the rule was understood and observed throughout Government.

Wright supervised a detailed presentation of a new management system designed to assist division chiefs in planning projects and in making maximum use of resources.

"I am pleased with the adjustments that have been made so far," Wright said, "and I am confident that we can continue to adjust to the organizational needs, and, if necessary, to the need for new procedures to deal with new economic and social concepts."

In a discussion of statistics on social indicators, officials said that they would concentrate on improving and coordinating present data rather than trying to develop a "happiness index" or a system of social accounting. Theodore G.

Clemence, Program Review Officer for SESA, said, "The task is properly in the hands of the statisticians, particularly survey statisticians, rather than the economists or sociologists."

As the first step in developing measurements of the quality of life, the Government will publish in mid-1973 a 450-page compendium of statistics that are related to eight major areas of social concern: health, education, employment, income, housing and the environment, leisure and recreation, public safety and legal justice, and population and family structure.

Clemence said social scientists generally have discussed four major approaches to social indicators:

- An attempt to develop a system of social accounts analogous to the National Income Accounts, which produce Gross National Product. This poses problems of measuring social benefits and costs, and the compounded problem of comparing these benefits and costs with economic activity. For example, should the cost of polluted air be measured, if that is possible, and deducted from Gross National Product?
- The development of composite indexes that measure major aspects of life—health, safety, etc. This approach was tried without success by the Department of Health, Education and Welfare in the late 1960s.
- The establishment of national social goals, and the measurement of movement toward or away from these goals.
- Concentration on measurement problems—in other words, attempting to improve the reliability and accuracy of the data.

Feliks Tamm, Chief of Statistical Indicators, said that SESA was using the fourth approach. He noted that 300 economic indicators were published in BEA's Business Conditions Digest each month, and he estimated that there were "even more social indicators — perhaps running into the thousands."

It is appropriate for the Government to concentrate on improving presently available data, Clemence said, while private research organizations engage in "the rather free-wheeling approaches on the cutting edge of social research—work on the frontiers." He also argued that SESA was an appropriate agency to handle social data because it is not engaged in social programs and therefore would not be in the business of evaluating its own projects.

Dr. Conrad Taeuber, Associate Director of Census and a veteran demographer, argued that both collection and analysis of social data could be improved in SESA without venturing into uncharted areas. For example, he said, the fertility rate—the number of births among each 1,000 women of child-bearing age—had declined from about 27 to less than 16 in 15 years and the trend is continuing but the bureau must depend to a large extent on 1968 data in analyzing the most recent developments in this area.

A new program to measure the economic impact of changes in the environment was explained by Martin L. Marimont, Assistant Director for Economic Accounts in BEA. He said that, through use of input-output tables, data would be produced showing the amount spent to eliminate pollution, by the major type of pollutant and by the type of expenditure involved—a fixed capital expenditure by business, for example.

Marimont has worked for many years on BEA's input-output tables, which are used to show how a given change in one industry affects all other industries. For example, they can be used to show how the substitution of plastic for steel in an auto part would affect the auto producer, steel and fabricating industries, the plastic industries and other related sectors.

He said that an accounting could be made of all the costs that are incurred in a given period to control the emission of pollution.

Plans also call for producing tables that will show the amount of pollutants emitted, by physical volume, by persons, governments, and various major industry sectors, and also how much pollution could be expected at a given level and composition of Gross National Product.

CONFIDENTIALITY—*Julius Shiskin (standing at microphone), speaks on the confidentiality of Social and Economics Statistics Administration information. Seated at right are Joseph R. Wright, Deputy Administrator of SESA, and Dr. George Hay Brown, Director, Bureau of the Census. At left is Dr. George Jaszi, Director, Bureau of Economic Analysis.*

AT THE SIGNING—*On hand to start the new Metropolitan Washington Business Resource Center in the District late last month were (seated, from left) Joseph B. Danzansky, Chairman of the Board of the new center, and John L. Jenkins, Office of Minority Business Enterprise Director. Watching them sign the contract were (from left) W. Ronald Evans, President of the D.C. Chamber of Commerce, John W. Stadtler, President of the Metropolitan Washington Board of Trade, Walter E. Washington, Mayor of Washington, Theodore R. Hagans, Vice President of D.C.'s Chamber of Commerce, and Nicholas Ortiz, Small Business Administration.*

More Minority Aid Available, As Cities Launch Resource Centers

The brake is off, and pressure is being applied to the gas pedal by both government and business to expand the opportunities for minorities in the country who want to open their own businesses or expand existing ones and to assist minority-owned firms who need managerial and technical guidance.

One tangible example of this can be seen in the Nation's Capital, where late last month the Metropolitan Washington Business Resource Center was opened. The new center, part of a joint government-business program for minority businessmen, is being sponsored by the Metropolitan Washington Board of Trade and the D.C. Chamber of Commerce and is funded by the Commerce Department's Office of Minority Business Enterprise under OMBE's recently launched Business Resource Center Program.

The BRC program is gaining momentum nationwide. Six BRCs have already been opened. Besides the center in Washington, D.C., other functioning centers include ones in New York City, Philadelphia, Charlotte, N.C., Cincinnati, and Chattanooga, Tenn. OMBE's goal is to have 50 BRCs funded and working by the end of 1972. Many of those will be sponsored by local Chamber of Commerces, and according to the Chamber of Commerce of the United States' *Quarterly Business Report on Urban Affairs* 22 of these C of C sponsored BRCs are in grant process at the present time.

Considered a breakthrough for minority businessmen, a Business Resource Center is an organization sponsored by prominent business leaders, with the help of Federal funding, to mobilize, coordinate and deploy the resources of business in support of local minority enterprise business development. These centers will aid organizations currently working with minority entrepreneurs (such as, business development organizations, Minority Enterprise Small Business Investment Companies, banks, the Small Business Administration, and other capital sources) to provide intensive support through technical and financial guidance.

The role of a BRC is not to be confused with that of a business development organization. A BRC will *not* package loan applications for submission to banks, MESBICs or other sources. It will, however, be responsible for developing resources in accord with needs demonstrated by business development organizations, with this role being fulfilled after a business development organization's clients have access to capital, markets and management know-how.

Identify opportunities

A BRC will be an information center and it will identify opportunities for minority businesses and seek out commitments from corporations to procure from minority firms, as well as exploring other markets. Among its responsibilities will be the sponsorship of minority suppliers' fairs and exhibitions and the encouragement of formal minority lending programs. It will also develop talent banks to make available at no cost to minority entrepreneurs experienced business and professional assistance in management and technical areas.

Awarding a two-year $300,000 contract to the Washington BRC July 26, OMBE Director John L. Jenkins said that this new center will generate "greater availability of private resources for minority businesses and catalog them in the areas of management and technical assistance, financing and opportunities."

Joseph B. Danzansky, Chairman of the Board, MWBRC, John W. Stadtler, President of the Metropolitan Washington Board of Trade, and W. Ronald Evans, President of the D.C. Chamber of Commerce, announced the new center should be in operation in 30 days, with a full-time staff of six employees.

—*OMBE*

Disaster Chasers On Prowl, Agency Tells Flood Victims

Victims of Tropical Storm Agnes are targets of migratory flim flam contractors, suppliers and salesmen who chase disasters for profit, the Small Business Administration warns.

No SBA fees

The Agency emphasized that it does not charge any fee for its service. Furthermore, SBA never endorses any contractor, repairman, or supplier, and all SBA employees working in disaster areas carry Federal credentials which disaster victims should ask to see when they are approached by a person posing as a representative of the Agency.

Among victims of the disaster flim-flammery was a bone-weary, dejected Fredericksburg, Va., couple. They were getting over the shock of seeing much of their home and personal property destroyed by Agnes when they were approached by a representative of a Virginia waterproofing firm.

Flashing a letter from SBA so that only the Agency's letterhead would show, the salesman convinced the couple that his firm was an "SBA-approved contractor."

He also persuaded them to apply for an SBA disaster loan to waterproof their flood-prone home, to use his firm to fill out their loan application and provide cost estimates and, of course, do the suggested waterproofing work. The couple signed a contract on the spot.

Because they were not permitted to read the letter bearing the SBA letterhead, they could not know it was merely a reiteration of a new SBA policy eliminating the requirements for contractors' estimates on its disaster loan application.

Naturally, they were not told that waterproofing is about as useful as wet paper in combatting raging flood waters.

PREY FOR FLIM FLAMMERS—*Victims of Tropical Storm Agnes are easy prey for flim flam contractors and salesmen who pose as representatives or consultants to SBA. This house was among those ravaged by the vicious hurricane.*

Nor did they know, the Agency said, that the purpose of SBA disaster loans is to restore homes or businesses to their pre-disaster condition, and that, since their home had not been waterproofed before Agnes visited Fredericksburg, SBA would not approve a disaster loan for that purpose after the storm.

Moreover, the Fredericksburg couple did not know that the waterproofing firm would pad their SBA loan application with exorbitant cost estimates for such projects as "digging out foundation," "repair and construction of new basement walls," and never even mention waterproofing.

Nor were they aware that they were about to become trapped by one of numerous schemes designed to deceive unwary victims of natural disasters.

SBA said that because the United States has suffered so many massive natural disasters within recent years, and because disaster relief laws have been liberalized, "disaster chasing" has become a profitable business.

Fortunately, the Fredericksburg couple made tentative arrangements to have their SBA loan, which was a waiting approval, transferred to their bank for disbursal to the waterproofing contractor.

The president of their bank quickly advised them that an SBA disaster loan would not cover waterproofing, that price estimates of the contracting firm seemed much too high, and that under *Regulation Z* of the *Federal Reserve Act* —the "Federal Truth in Lending Law"—any consumer can cancel a contract within three working days after signing it.

At his recommendation, the couple cancelled the contract immediately, notified SBA of the contractor's ploy, and submitted an SBA loan application to restore their home to its pre-disaster condition.

SBA said that, since the destruction caused by Agnes was so extensive and widespread, the professional parasites from all parts of the country are swooping down in full force in the six Eastern states —Florida, Virginia, West Virginia, Maryland, Pennsylvania and New York.

However, because there are few Federal laws or licensing requirements governing construction contractors, repairmen, suppliers, and appraisers, the burden of proof and legal prosecution must rest ultimately with state and local governments and the disaster victim himself, SBA said.

Help with paper

The Agency further emphasized that its employees will help disaster victims fill out their loan applications, that official SBA appraisers will prepare on-site damage estimates, and that there is absolutely no fee charged for any of these services.

SBA said Pennsylvanians should be wary of representatives of a private Washington, D. C. firm which has a large cadre of employees working in that state to persuade disaster victims to hire them as their agents in dealing with SBA disaster offices. SBA said representatives of the firm try to scare disaster victims into believing that they will not be able to obtain a disaster loan without the firm's "influence" and "contacts" with SBA employees.

False promises

The firm's salesmen promise to get the victim a disaster loan in return for 10 percent or 20 percent of the loan received, the Agency said.

Under SBA regulations, a disaster victim may elect to use the services of an accounting, legal, or auditing firm to prepare his loan application. However, the firm may not charge the victim more than the normal reasonable fee for services rendered.

The Washington, D. C. firm in question, however, circumvents this regulation by listing a reasonable, legal accounting fee on the loan application and then demanding an exorbitant cash fee from the applicant before submitting the application to SBA, the Agency said.

Calendar For Businessmen

Aug. 15 — Pittsburgh — Western Pennsylvania Federal Procurement Conference. For information, Miss Jeannie Alexander, care of U.S. Rep. H. John Heinz III, 507 Cannon House Office Building, Washington, D. C., 20515. Phone: 202-225-2135.

Aug. 17—York, Pa.—Federal Procurement Conference. For information, Office of U.S. Rep. George A. Goodling, 1714 Longworth Building, Washington, D. C., 20515. Phone: 202-255-5836.

Aug. 17—Kansas City, Mo.—Minority Enterprise Federal Procurement Conference. For information, Luis Encinas, Office Of Minority Business Enterprise, Department of Commerce, Washington, D. C., 20230. Phone: 202-967-3936.

Aug. 25—San Francisco—Minority Enterprise Federal Procurement Conference. For information, Luis Encinas, Office of Minority Business Enterprise, Department of Commerce, Washington, D. C., 20230. Phone: 202-967-3936.

Sept. 23-28—Minneapolis—American Public Works Association annual convention. For information, R. D. Bugher, executive director, APWA. Phone: 312-955-8026.

Sept. 24-27—Cincinnati—National Environmental Information Symposium, sponsored by the U.S. Environmental Protection Agency at EPA's National Environmental Research Center, Cincinnati, 45268. For information, Gilbert M. Gigliotti, EPA Center, Cincinnati. Phone: 513-871-1820.

Field Units Open Doors To Rebuild Economies

Four field units to help communities in three states rebuild their economies in the wake of Tropical Storm Agnes are being operated by the Commerce Department's Economic Development Administration. The special offices are expected to be open through August.

Determining needs

EDA personnel are stationed in field offices of the Office of Emergency Preparedness in Elmira, N.Y., Harrisburg and Wilkes-Barre, Pa., and Richmond, Va. These specialists will work with local officials and OEP staff members already on the scene to determine the extent of need for EDA aid and the type of help needed.

Secretary Peterson said it is anticipated that a number of communities in the area will qualify for EDA assistance because of the sudden rise in unemployment resulting from the floods.

EDA units are stationed at:

Elmira — Junior High East Building, Center Street, Horseheads, N.Y. Phone: 607-739-0351.

Richmond — Federal Building, 7828 Midlothian Pike. Phone: 703-272-7533.

Harrisburg—Room 390, Federal Building, 228 Walnut St. Phone: 717-782-3424.

Wilkes-Barre — Kings College, 133 N. River St. Phone: 717-829-1341.

Ombudsman For Business

Businessmen who need assistance in their dealings with the Federal Government now have a central office in Washington, D.C., to write or call for information, suggestions, or even for registering complaints —the Commerce Department Ombudsman for Business.

All inquiries should be addressed to the Ombudsman, Thomas E. Drumm, Jr., Special Assistant to the Secretary, U.S. Department of Commerce, Washington, D.C. 20230, or call 202-967-3178.

- **Redesign of matches, lighters recommended**
- **Jet seeders standby to modify hurricanes**
- **New Weather Watch plan to improve satellite system**
- **Safer ranges sought through design change**
- **Patents of special interest**

Communications Confab Seeks State Ties

A nationwide telecommunications information network which could ultimately mean expanded markets for the vigorous telecommunications industry is in prospect following the recent first meeting in Washington of State and Federal telecommunications experts.

Purpose of the Conference of State Telecommunication Directors was to better meet the needs of States for information by developing a program by which the States and the Federal Government can mutually share telecommunications information on a systematic basis. State representatives appointed an ad hoc group to advise the Commerce Department on this matter.

The conference was sponsored by Commerce's Office of Telecommunications. Participants represented 40 States and the District of Columbia as well as many major Federal agencies.

Dr. John W. Richardson, Acting Director of Commerce's Office of Telecommunications, called on conferees to plan a telecommunications information service using the following three guidelines:

- Maintain the broadest freedom of choice and planning for each individual state which knows its own needs best;
- Keep the program flexible shaping it with experience;
- Select those courses of action yielding the largest benefit for the limited funds available.

Waiting to be used

"Telecommunications is a technology which has advanced more rapidly than our ability to put it to use," he said. "It is an 'on the shelf' technology in the sense that there have been many developments in recent years which are just waiting to be used. Prime examples are cable television and domestic satellites.

"The range of applications is far broader than most other technologies," said Richardson. "For example, jet engine technology has helped us move more people faster, but telecommunications was needed to get the planes in and out of airports, to keep them on course, and to keep them out of the path of other planes."

Richardson added that telecommunications combined with other technologies provides an entirely new dimension as for example when it is combined with computer technology.

In fiscal year 1972 alone, at least $1 billion was spent by communities, State and Federal Governments on civilian telecommunications research and development. Yet, there is no formal mechanism for the States to determine what the other States and the Federal Government are doing in telecommunications research and development or for evaluating the applicability of new telecommunications technology for use by the States. There is no mechanism for sharing test data or for taking advantage

LOOKING AT THE FUTURE—*Dr. Robert W. Cairns, Deputy Assistant Secretary of Commerce for Science & Technology, told the Conference of State Telecommunications Directors that "by the year 2000, our lives will be revolutionized by the twin technologies of the computer and telecommunications."*

of federal experience with a particular piece of equipment.

Mechanisms are needed to do this, according to Richardson, to avoid the cost of duplicative work. It is believed that a telecommunications information service operating between the States and the Federal Government will help to provide such a mechanism.

"Too often, the role of telecommunications in government is not considered important until a natural disaster strikes, as in the terrible floods so recently along the East Coast and in the Middle West," Dr. Robert W. Cairns, Deputy Assistant Secretary of Commerce for Science and Technology, told the conference. "It seems that everyone wants telecommunications throughout a disaster area, but such a system is neglected until an emergency arises.

"Yet any given State lacks the resources — time, manpower, and money—to solve all these problems by itself," said Cairns. "But collectively the States, supported by the Federal Government, can aggregate both ideas and the market.

"This collectiveness requires a telecommunications awareness; that is, each state needs to be aware of the telecommunications undertaking in the other States," he added, "and each needs to be able to evaluate the results of those undertakings as they apply to his own state."

As far as government involvement is concerned in the nation's telecommunications system, Walter Hinchman, Assistant Director of the Office of Telecommunications Policy at the White House, said "we see little need or justification for more extensive governmental involvement in the detailed operational and economic decisions of the industry, or for expanding government ownership and operation of communication systems. In fact, we may have already exceeded prudent limits in these directions," added Hinchman.

INFORMATION SERVICE—*Dr. John W. Richardson, Acting Director of Commerce's Office of Telecommunications called on State communications directors to plan a telecommunications information service by which the States and the Federal Government could mutually share research and development and evaluate the applicability of new technology.*

Entrusting the nation's communication systems and services primarily to private enterprise, he said, has produced "a vigorous, innovative communications industry which knows no peers in either services or rates."

He predicted "much more widespread use of telecommunications to improve productivity in all phases of government operations. The use of teleconferencing and videoconferencing, teleprocessing, and other new services promises both to improve government operations and to reduce their cost," said Hinchman.

"Yet in this area," he added, "we will not forget our basic principle or primary reliance on the private sector and do not wish to confuse government systems with government services.

Sound arguments

"Sound arguments can be made for government ownership and operation of specialized systems for national security, police and emergency communications and similar services—although even here the rationale is not always that clear," he told the conference. "But teleprocessing, videoconferencing, interactive educational services, and similar operations are neither unique nor vital to government operations, and will in most instances be economical only if provided jointly to both government and private customers.

"Similarly, we believe that economic value should be introduced into the allocation and use of the radio spectrum," Hinchman pointed out. "There is a need to develop more flexible allocation processes which can better respond to variations in local needs and opportunities."

Reporting on progress in their areas, several State representatives outlined present telecommunication programs. Nebraska's Director of General Services, Delman C. Maier, for example, said the decision was made to initially develop a test bed system of procedures in two areas of his state. This was started in 1968, became fully operational in 1970, and provided a central operations center in two areas, each serving 12 counties, in central and southeastern parts of the State with a fully integrated telecommunications system.

COMPREHENSIVE PLAN—*Richard C. Austin, Pennsylvania's Director of Communications, described a comprehensive plan that has been proposed to meet overall state needs. It includes data from state agencies, the Legislature, field offices, and Federal and local governments.*

"A large segment of the independent telephone industry in the State formed a corporation for the express purpose of satisfying this need," said Maier. "Existing companies were unable to meet the need because of tariff or other precedent-setting policies. Bids are now out for a statewide system."

Maier added that "this is an opportunity for private industry to perform the full task of providing state government communications."

Nebraska's new system will provide:

- Statewide dial telephone service with capability of interconnections to all radio-equipped vehicles and "walkie-talkie" portable radio sets of all state and local government agencies and supporting public services.
- Statewide inter-intra agency connected radio service serving State and local government.
- Statewide, computer controlled, inter-intra agency teletype service, a service with data access and national interconnect.
- Statewide system for data and facsimile transmission between all medical facilities and state colleges, with access, as desired, to all other agency facilities throughout the State.
- Statewide color transmission for educational television.

Such a totally integrated telecommunications system, Maier pointed out, provides "consolidated communications, using the emergency operation center facility in

INDUSTRY LAUDED — *Walter Hinchman, Assistant Director of the White House Office of Telecommunications Policy, said entrusting the nation's communication systems and services primarily to private enterprise has produced a "vigorous, innovative industry."*

STATE COMMUNICATIONS DIRECTORS—*Particular problems of concern to their respective States were described to the conference by (left to right): Edward J. Mason, New York; Donald R. Allen, Florida; Frank D. Leatherman, North Carolina; and Delmar C. Maier, Nebraska. Today 24 States have a statewide communications authority, two in the process.*

local emergencies and day-to-day agency activities, provides a purpose for existence, can create the multi-agency cooperation habit essential to any emergency, including full scale national emergency."

Other State telecommunication developments were discussed by representatives of New York, Pennsylvania, Florida and California.

A nationwide survey of state-wide telecommunications planning made by Commerce's Office of Telecommunications reveals that six years ago only six states had a statewide telecommunication authority. Today 24 states have some sort of statewide authority and at least two more States are in the process of establishing such authorities. This trend indicates that the States are recognizing the importance of telecommunications technology as a conserver of time, manpower, and cost, and as a necessary ingredient to the movement of information.

Conferees agreed to call another similar conference in a year and appointed an ad hoc working group to explore the formation of an Association of State Telecommunications Directors.

—Office of Telecommunications

By the year 2000, our lives will be revolutionized by the twin technologies of the computer and telecommunications.

That year will be another election year, but perhaps nobody will go to the polls; the polls will come to us, and we'll possibly all vote simultaneously and receive the election results instantaneously.

Newspapers and books will come to us, and we'll select the contents and print our own, to our tastes, in home or office.

But none of these developments will take place by the year 2000 unless governmental agencies prepare now to take a number of important steps.

The private sector can be relied upon to produce the technology for all the telecommunications miracles we can dream of. Governments must deal with the complex socio-economic problems as well as the telecommunications technology. *—Dr. Robert W. Cairns, Deputy Assistant Secretary of Commerce for Science and Technology.*

PONDERING THE ISSUES—*State communications directors and representatives of 40 States and the District of Columbia as well as many major Federal agencies participated in the conference hearing from both government and industry.*

Scientists Recommend Redesign Of Matches, Lighters To Prevent Children Igniting Selves

Matches and cigarette lighters could be redesigned to make them difficult or impossible for children to light, according to fire research scientists at Commerce's National Bureau of Standards.

A recent study reveals that 28 percent of accidental garment fires result from match or lighter ignition. Together they account for 24 percent of all fabric fires. Matches were the ignition source of these fires five times more often than lighters.

Forty-four percent of the victims of such fires were children under 10 years of age. Practically all of these cases involved playing with, rather than using, the matches or lighters.

A contract has been negotiated with Trident Engineering Associates of Annapolis, Md., to study the chain of events leading to garment fires in which matches or lighters were the ignition sources and to recommend design changes in these items to reduce the hazards they present. Prototype safer matches and designs of prototype safer lighters are expected from this study.

Flammable fabrics

The study was carried out under responsibilities assigned the Bureau of Standards under the Flammable Fabrics Act, as revised and amended in 1967. That Act calls for the Secretary of Health, Education, and Welfare, in cooperation with the Secretary of Commerce, to conduct a continuing study and inves-

REDESIGN NEEDED—*A recent National Bureau of Standards study reveals that many lives could be saved each year if matches were made difficult or impossible for children to light as happens when youngsters play with matches as shown here.*

tigation of deaths, injuries, and economic losses resulting from accidental burning of fabric products. Fire accident cases involving fabric products are investigated by Food and Drug Administration inspectors and others. Reports on the cases, together with remains of the fabric products involved, are sent to the NBS Office of Flammable Fabrics for analysis and testing. The Flammable Fabrics Office then processes the reports and fabric remains through its Flammable Fabric Accident Case and Testing System.

Processing at NBS includes reviewing and screening of case reports, laboratory testing and characterization of the fabric product, data encoding, formatting, editing and entry into a computer file. As many as 200 data elements can be coded for each fire accident case. Information on the time and location of the accident, personal and socio-economic facts about the victims, extent of injuries and losses, the sequence of events leading to the accident, the nature of the involvement of the fabric product, the fabric construction and fiber content and the results of flammability test are analyzed in the program.

Studies of the data show how frequently different fabric products are involved in injurious fires and provide insight into trends and significant interrelationships between fabrics and fire sources. The information is used to develop priorities for national mandatory standards for the flammability of fabric products; to provide the basis for the development of realistic tests to discriminate between highly hazardous products and those of lower potential hazard; and to help understand other aspects of the flammable fabric problem. The prime objective is to identify and provide assistance in ranking the various ways of reducing the burden of deaths, injuries, and economic losses sustained from accidental burning of fabric products.

Ignition-source problem

Considerable progress is being made in promulgating standards for flammable fabrics. But the ignition-source problem has only recently been tackled. The problem is especially difficult when it involves fabrics not covered by standards and for fabrics that have lost their fire retardancy due to washing.

Standards fire experts recommend that matches be packaged in such a way as to limit a child's access to them and that design of matches and lighters be changed to make it virtually impossible for a child to ignite them.

—National Bureau of Standards

Jet Seeders Stand By To Modify Hurricanes

Military jet seeders are standing by now until October 31 awaiting the opportunity to seed hurricanes in an attempt to diminish their force. This is Project Stormfury conducted by Commerce's National Oceanic and Atmospheric Administration and the Department of Defense as in past years.

Seeding experiments will be conducted on storms in the southwestern Atlantic, the Caribbean and the Gulf of Mexico when the probability is 10 percent or less that the hurricane center will come within 50 miles of a populated area within 18 hours after seeding.

The project's major goal for 1972 is to confirm the promising results of the experiments conducted in 1969. On each of two August days that summer Hurricane Debbie was seeded five times during an eight-hour period. After seeding the storms, the winds decreased as much as 31 percent.

Using the 1969 experience and computer simulations conducted since, seeding runs this year will begin about two miles further out from the inner edge of the storm's eyewall than in previous experiments.

Other experiments planned for this year include seeding of hurricane rainsectors and rainbands, and continuation of experiments on lines of tropical cumulus clouds not associated with hurricanes.

—NOAA

New Weather Watch Plan To Improve Satellite System, Monitor Pollutants

"By monitoring and predicting weather over the globe and by assessing the impact of man's activities upon the atmosphere, the World Weather Program helps significantly to improve the quality of our life and the safety of the earth's inhabitants," President Nixon says in the recently released "U.S. World Weather Program Plan."

U.S. participation in the World Weather Program is coordinated by Commerce's National Oceanic and Atmospheric Administration. The plan for the coming year includes contributions of the Departments of Defense, State, and Transportation, the Environmental Protection Agency, Atomic Energy Commission, National Aeronautics and Space Administration, and the National Science Foundation, in addition to NOAA.

The program is an international effort coordinated by the World Meteorological Organization to increase the accuracy and time range of weather predictions, to develop means for assessing the consequences of atmospheric pollution, to determine the feasibility of large-scale weather modification, and to establish new bonds of international cooperation.

Having completed an initial four-year phase at the close of 1971, the international World Weather Watch plans for 1972-75 include extension of the existing network of meteorological observations, establishment of polar-orbiting satellite systems equipped to make vertical-temperature soundings, and continuous monitoring of the earth's cloud patterns by four or five earth-synchronous satellites. The data are to be exchanged internationally through a global communications system that will be completed during this period.

Second-phase plans also emphasize the development of networks for measuring background pollutants in the atmosphere—regional stations to observe turbidity (reduced transparency to radiation) and the constituents of precipitation; global baseline stations to document long-term changes that affect weather and climate.

According to the newly-published plan, the major U.S. World Weather Watch contributions during the coming year will include: improving the current operational satellite system; developing the next-generation operational satellite system; establishing an expanded atmospheric-monitoring capability; increasing computer-processing capacity; and providing assistance to the weather services of developing nations.

Launching later

NOAA will launch polar-orbiting satellites of the improved TIROS Operational Satellite series later this year, which will provide operational temperature soundings in addition to day and night cloud-cover images. In 1973, NASA will launch the Synchronous Meteorological Satellite for nearly continuous viewing of severe storms and cloud cover on a 24-hour basis. This spacecraft is the prototype for NOAA's Geostationary Operational Environmental (GOES) system.

To document long-term changes in the atmosphere, the U.S. has for many years operated a baseline station at Mauna Loa, Hawaii, and supported related activities in New Zealand. During the coming year, NOAA plans to establish an additional station at Barrow, Alaska, to provide the first such measurements in the Arctic. The monitoring program in the Antarctic will be expanded through support from the National Science Foundation. To observe changes which may result from increased use of nuclear technology, the AEC plans to begin measuring tropospheric radionuclides on a Pacific Island.

"The World Weather Program Plan for Fiscal Year 1973" is available for 50 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. —*NOAA*

Safer Kitchen Ranges Expected Through Basic Design Change Plan

Kitchen range manufacturers and Commerce's National Bureau of Standards have launched a comprehensive program which will result in recommended design changes of gas and electric ranges to reduce significantly the dangers of accidental clothing fires.

In announcing the move, Commerce Secretary Peterson said the Department's Fire Safety and Research Program for Consumer Products has already developed "preliminary design changes" for greater range safety.

"More than one out of three clothing fires which cause personal injuries involve kitchen ranges," Peterson said. "And while we recognize that the safety of kitchen ranges—like the safety of many other consumer items — depends largely on how they're used, we believe there are certain fundamental design changes which could provide a greater margin of safety for the consumer."

Under a cooperative program, the National Bureau of Standards, the American Gas Association, and the Underwriter's Laboratories are determining how kitchen range accidents occur, evaluating suggested design changes to make ranges safer, and will shortly recommend new performance standards for actual ranges to meet the voluntary safety guidelines.

"We're considering specific changes such as control knobs which cannot be accidentally turned, burner arrangements which

do not necessitate 'reaching-over' one burner to use another, and eliminating the danger of 'invisible' hot burners," Peterson explained.

Final comprehensive kitchen range safety reports are expected to be completed by early Fall.

—*Office of the Secretary*

U.S. Patent System Shaken By Recent Court Decisions, Official Declares

There exists a pressing need to restore confidence in the nation's patent system, a system which lies at the foundation of the entire economic and industrial structure, says U.S. Commissioner of Patents Robert Gottschalk.

Gottschalk, addressing the Patent, Trademark and Copyright Section of the State Bar of Texas at Houston recently, stated that confidence in the patent system "has been shaken by a series of court decisions running in a tide against the patentee, and undermining the freedom and certainty so essential to effective patent licensing, and to the effective functioning of the patent system.

"Lacking such confidence," he said, "the public will not be stimulated to invent and innovate, or to develop or market new inventions. Lacking such confidence, the courts will not afford patent holders the protection they have earned. . . . And the Congress will tend to withhold its necessary support."

The Commissioner stated that recent decisions of many of the courts, including the Supreme Court, reveal a negative attitude and philosophy with respect to patents. He found "a most disturbing indicator" of this attitude of the courts in the recent Supreme Court decision in the *Deepsouth* case.

There, the alleged infringer was manufacturing and exporting all the parts of a patented combination —but in less than complete or final assembly. For that reason only, the court held there was no infringement. Also, since final assembly or "making" of the device took place in a foreign country, beyond the reach of U.S. patent statutes, there was no contributory infringement.

"I believe that *Deepsouth* is very significant—not so much for what it specifically holds, but for what it so starkly reveals of the court's negative attitude and philosophy with respect to patents and what this may portend for the future," the Commissioner declared.

"As far as this particular decision is concerned, I think we ought to look very carefully at the possibility of seeking remedial legislation," he suggested.

His reasons are based on several major considerations:

- "Our nation now faces a critical challenge which makes it imperative that we speed up our technological progress, improve our productivity and strengthen our economy.
- "This is a matter of national policy, with a very high priority which has been emphasized repeatedly in recent months by the Administration and the Congress.
- "The anti-patent thrust of *Deepsouth* serves only to thwart this national purpose in an hour of trial and need.
- "It must be sharply and promptly corrected—and only legislation can do this.
- "The pivotal issue which *Deepsouth* highlights once again is that of redressing the imbalance between the patent laws and the anti-monopoly laws as they are currently being interpreted and applied by so many of our courts."

He emphasized the need for enactment of legislation supported by the Commerce Department along the same lines as the so-called Scott Amendments, which would, in the Commissioner's opinion, overcome the defects of the present case-by-case approach for resolving patent-antitrust questions.—*Patent Office*

CONFIDENCE NEEDED—*U.S. Patents Commissioner Robert Gottschalk told a recent Texas Bar meeting at Houston that confidence needs to be restored to the nation's patent system else the public will not be stimulated to invent and innovate or to develop or market new inventions. Recent court decisions don't help, he said.*

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

Crop harvester platform. A crop harvester having a self-propelled chassis and a crop harvester platform supported forwardly of the chassis for cutting a standing crop and depositing the cut crop into a swath on the ground. The harvester platform includes a cutter, a crop-gathering reel above the cutter, and a pair of gauge wheels behind the cutter for supporting the platform for movement over the ground. A pair of shield structures is mounted on the platform over the respective gauge wheels. The shield structures are arranged to direct the flow of cut crop rearwardly and laterally inwardly of the platform to form the swath. Patent No. 3,672,134 issued to Donald A. McCallum, Burlington, Ontario, Canada and assigned to International Harvester Company of Chicago.

Air pollution-free internal combustion engine. An air pollution-free internal combustion engine and method for operating such engine are provided in which the engine has at least one cylinder, an exhaust port and exhaust valve, fuel, oxygen gas and water spray injectors, a piston in the cylinder, means for cyclically opening and closing the exhaust valve, a fuel storage and supply system for feeding hydrogen gas or a liquid hydrocarbon to the fuel injector, an oxygen storage and supply system for feeding substantially pure oxygen to the oxygen gas injector, means for igniting the injected mixture of fuel and oxygen, and a water recovery system for recovering water from the exhaust discharged from the cylinder and for recycling the recovered water to the water spray injector.

In a typical engine cycle, the exhaust valve is closed prior to completion of the exhaust stroke to entrain some exhaust gas in the cylinder after the exhaust valve closes and before the piston reaches top dead center on the exhaust stroke, and while relatively low pressures exist in the cylinder.

Patents numbering 2,709,-808 to 2,712,130 expired during June, 1972. Upon the expiration of the 17-year period covered by a patent, the invention passes into the public domain and may be made, used or sold by the public without payment of any royalty, or infringement of the inventors exclusive patent rights.

After combustion is substantially completed, the exhaust valve opens just before the piston reaches bottom dead center on the power stroke where water is injected into the cylinder to cool the cylinder walls, piston, dome combustion chamber wall and exhaust gas. A portion of the exhaust gas is then discharged from the cylinder through the exhaust port on the exhaust stroke. Patent No. 3,672,-341 issued to Richard D. Smith, Palo Alto, Calif., and others and assigned to Combustion Power Company, Inc., Palo Alto.

Automatic restraint system arming control. An occupant restraint mechanism which is mounted in a vehicle and automatically operable for restraining movement of the occupant relative to the vehicle in response to the vehicle being involved in a collision, including means for detecting the presence of an occupant and means for preventing operation of the restraint mechanism if no occupant is present to be restrained. Patent No. 3,672,699 issued to Edward Mandell De Windt, Lyndhurst, Ohio, and assigned to Eaton Corp., Cleveland.

Abstracts and drawings of patents are issued in the *Patent Official Gazette* each Tuesday. More than 1,600 patents are issued each week. Trademarks are published in the *Trademark Official Gazette.* Copies of the *Patent Official Gazette* and the *Trademark Official Gazette* may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402. A microfilm Patent Subscription Service is available from the National Technical Information Service, Springfield, Va., 22151.

Science Calendar

August 9-12—Kailua-Kona, Hawaii—International Symposium on Billfish. Sponsored by National Marine Fisheries Service.

August 9-11—Boulder, Colo.—National Bureau of Standards. Cryogenic Engineering Conference.

August 21-25—Boulder, Colo.—National Bureau of Standards. Thirteenth International Conference on Low Temperature Physics. University of Colorado.

Sept. 20-22—Gaithersburg, Md.—National Bureau of Standards. IEEE-TAP Environmental Conference.

Oct. 2-6—Gaithersburg, Md.—National Bureau of Standards. Third International Congress on Marine Corrosion & Fouling. Sponsored by the Permanent International Commission for Research on Preservation of Materials in the Marine Environment in cooperation with NBS, Maritime Administration, Office of Naval Research, and Naval Oceanographic Office.

Oct. 17-18—Gaithersburg, Md.—National Bureau of Standards. Association for Computing Machinery, Special Interest Group on Computer Systems Installation Management.

Oct. 30-Nov. 1—Gaithersburg, Md.—National Bureau of Standards. "Dimensional Accuracy in Mfg."

INTERNATIONAL COMMERCE REPORT

- Petrochemical trade mission visits E. Europe
- Details on tariff changes as U.K. enters EEC
- U.S. exhibitors score in Tehran, Poznan
- Business outlook in Malaysia, Chile, Burundi, Togo
- List of upcoming U.S. overseas promotions
- Investment, trade leads from around the world

U.S. Sales, Share Lag In Most Top Markets

The dollar revaluation is beginning to complicate assessments of worldwide trade activity. Thus, the latest 12-month import totals of the major nations—through April or May, mostly—show substantial expansion, when measured by the dollar yardstick. But when the measuring stick is the local currency, the growth is much more modest.

In local currency terms, the only buoyancy shown in imports among the dozen largest traders was in Canada, France, Belgium-Luxembourg, Spain and the United Kingdom. In dollar terms, some other countries also showed high growth rates, but these were countries that revalued their currencies by the largest percentage, most notably Germany and Switzerland.

A significant feature of the data in the accompanying World Market Report table (next page) is that, even measured in dollar terms, over the latest 12-month period an overwhelming majority of America's largest trading partners reduced the value of their imports from the U.S. while buying more from others. The U.S. share thus fell sharply in each—in fact, declines are shown in three fourths of the listed markets.

Although not reflected in demand for U.S. goods, the economic situation in many of the large industrial countries began to improve in the latter part of 1971, though inflation is still a major concern and unemployment remains a problem. Levels of industrial production are beginning to turn upward, especially in Japan and Germany. The economies of Canada and France continue strong. In the United Kingdom, however, production and investment still remain sluggish, while in Italy economic and political problems continue.

Most of the top traders purchased fewer goods from the United States in the latest 12 months than in the preceding year—in some countries, substantially less. The declines were 9 percent or more (calculated in dollar terms) for Italy, Sweden, Japan, Australia, and Belgium-Luxembourg. Calculated in national currencies—that is, without reference to the realignment relative to the dollar—the declines in imports from the United States for each of these countries was substantially larger and Germany and Britain would be added to the list.

Canada buys more

Only in Canada was the rise in imports of U.S. goods significant. Such imports grew by 19 percent, but even so, those from other sources, especially Japan, increased even more rapidly. A major part of the increase from the United States was accounted for by large inflows of passenger cars and of engines and other parts for assem-

bly and shipment back to the United States. In addition, imports of non-road tractors increased notably.

Among the other top 12 traders only the Netherlands and France increased their imports of U.S. goods; in both, the rise was minimal. In the Netherlands, production levels in several industries barely advanced during most of the 12-month period. There were import reductions for a wide range of U.S. supplies, including organic chemicals, nonferrous ores, and office machinery. At the same time, Dutch purchases of U.S. corn were sharply curtailed as the inflow from France rose substantially. Only sizable advances in aircraft and soybeans kept imports of U.S. goods from declining.

Though France has enjoyed a relatively buoyant economy, shipments from the U.S. barely held even with the preceding 12 months because of lower aircraft and metal arrivals. Imports of U.S. wheat and corn also fell. On the plus side, office machines and power-generating machinery posted gains, as did animal feedstuffs and textile fibers.

World Market

The 40 markets shown below accounted for 87 percent of 1971 imports

Values in millions of dollars — Published

Country	1971 Imports			1972 Imports January through latest month				Import change in latest available 12-month period*		Reserves at end of first quarter	
	From world	From U.S.	U.S. share %	Latest month	From world	From U.S.	U.S. share %	From world %	From U.S. %	1971	1972
Germany, Fed. Rep.	34,392	3,544	10.3	May	16,313	1,465	9.0	+ 18	— 3	15,803	19,747
United Kingdom	23,973	2,648	11.0	May	11,765	1,271	10.8	+ 15	— 5	3,316	7,074
France	21,247	1,800	8.5	Apr.	8,727	758	8.7	+ 18	+ 1	5,490	8,446
Japan	19,721	4,985	25.3	Apr.	7,287	1,925	26.4	+ 5	— 11	5,899	16,664
Canada	16,822	11,804	70.2	May	8,181	5,678	69.4	+ 22	+ 19	4,845	5,890
Italy	15,890	1,429	9.0	Mar.	4,486	394	8.8	+ 6	— 9	6,034	6,654
Netherlands	15,525	1,473	9.5	Mar.	4,240	333	7.9	+ 14	+ 2	3,542	4,361
Belgium-Luxembourg	12,866	821	6.4	Mar.	3,750	202	5.4	+ 17	— 17	3,073	3,673
Switzerland	7,221	514	7.1	Apr.	2,680	184	6.8	+ 16	— 1	4,623	6,744
Sweden	7,083	566	8.0	Mar.	1,979	151	7.6	+ 4	— 9	867	1,335
Australia	5,256	1,161	22.1	Mar.	1,308	289	22.1	+ 4	— 12	2,077	3,880
Spain	4,965	771	15.5	Apr.	2,041	325	15.9	+ 16	— 2	2,077	3,637
Denmark	4,545	380	8.4	Apr.	1,537	120	7.8	+ 4	+ 20	595	863
South Africa, Rep.	4,432	723	16.3	.....	.....	.....	.....	+ 13	+ 11	948	842
Austria	4,192	156	3.7	Apr.	1,555	53	3.4	+ 19	+ 43	1,776	2,370
Norway	4,082	244	6.0	Apr.	1,369	85	6.2	+ 9	— 3	872	1,209
Hong Kong	3,388	423	12.5	Apr.	1,165	138	11.9	+ 12	+ 2	(1)	(1)
Yugoslavia	3,317	201	6.1	Mar.	702	57	8.1	+ (2)	+ 8	158	402
Singapore	2,828	360	12.7	Jan.	255	30	11.9	+ 16	+ 36	314	3369
Finland	2,795	126	4.5	May	1,250	55	4.4	+ 10	— 15	537	809

Note: The countries shown above include the 40 major importers of U.S. merchandise in 1971 for which current data are available. In order to present comparable statistics for all countries, import data have been adjusted from an f.o.b. to a c.i.f. valuation for Australia, Canada, Philippines, and Republic of South Africa. Reserves include official holdings of gold and foreign exchange, the gold tranche position, and Special Drawing Rights in the International Monetary Fund.

Several other large industrial nations recorded notable overall import gains, but their purchases from the United States declined. Arrivals in Germany of various U.S. goods fell below previous levels, especially those of industrial supplies, including nonferrous ores and metals, steel, and organic chemicals. Increases were recorded, however, in soybeans, tobacco, and corn from this country. A large part of the rise in Britain's total imports stemmed from consumer goods which the United States has not traditionally supplied. Imports from this country declined, despite some advance in purchases of coal and aircraft. Arrivals of U.S. office machines, organic chemicals, and steel fell sharply.

Japanese imports from all sources in the 12 months ending April advanced sluggishly in dollar terms; in terms of yen, they showed an absolute decline despite a sharp rise in industrial output early this year. Reduced purchases of iron and steel scrap, lumber, coal, and corn contributed to an overall decline in imports from the United States. Stepped-up arrivals of aircraft helped prevent an even more substantial drop. Similarly, total arrivals in Italy rose modestly, but those from this country dropped, largely as a result of lower imports of steel and copper.

U.S. exporters had more success in the smaller developed countries. In both Austria and Ireland, increased purchases of aircraft contributed a major part of the substantial rise in imports of U.S. goods. Arrivals of U.S. goods in Denmark, Greece, and Yugoslavia also rose more rapidly than from other suppliers. In all five of these nations, the U.S. share of the import market improved.

In Mexico, although purchases by the private sector rose modestly, a nearly 30 percent decrease in imports by the public sector more than offset that gain. Since the United States is the largest source of Mexican imports, the softening in demand resulted in a moderate drop in purchases from this country. Declines in arrivals of U.S. nonelectric machinery, aircraft, iron and steel scrap, and corn were especially sharp.

The United States improved its standing in only a handful of the developing countries. Singapore's economy continued to surge, and its imports of U.S. goods rose by more than one third. Purchases of aircraft and semi-conductor

Report

Bureau of International Commerce

into all free-world markets and 85 percent of imports from the U.S.

quarterly

Country	1971 Imports			1972 Imports January through latest month				Import change in latest available 12-month period*		Reserves at end of first quarter	
	From world	From U.S.	U.S. share %	Latest month	From world	From U.S.	U.S. share %	From world %	From U.S. %	1971	1972
Mexico	2,407	1,479	61.4	.....	.....	.....	.....	− 2	− 6	839	[4]1,041
Korea, Rep.	2,394	678	28.3	Mar.	510	132	25.9	+ 16	+ 8	570	583
Greece	2,098	139	6.6	.....	.....	.....	.....	+ 7	+ 20	298	561
Iran	1,871	242	13.0	.....	.....	.....	.....	+ 14	+ 11	286	778
Argentina	1,869	415	22.2	.....	.....	.....	.....	+ 10	− 1	610	278
Taiwan	1,844	408	22.1	.....	.....	.....	.....	+ 21	+ 12	638	561
Ireland	1,834	158	8.6	Feb.	321	29	8.9	+ 16	+ 49	801	1,063
Israel	1,786	429	24.0	Feb.	270	54	20.1	+ 15	+ 22	528	1,022
Portugal	1,772	122	6.9	Mar.	400	50	12.5	+ 19	+ 16	1,508	1,969
Nigeria	1,507	212	14.1	.....	.....	.....	.....	+ 42	+ 38	290	361
New Zealand	1,346	137	10.2	.....	.....	.....	.....	+ 8	− 17	168	437
Philippines	1,316	328	24.9	Mar.	333	79	23.9	+ 11	− 7	280	417
Thailand	1,287	183	14.2	.....	.....	.....	.....	− [2]	− 5	941	992
Indonesia	1,174	177	15.1	.....	.....	.....	.....	+ 31	+ 12	[1]	[1]
Turkey	1,088	129	11.8	Apr.	428	47	10.9	+ 23	− [2]	435	955
Pakistan	921	227	24.7	Mar.	161	31	19.4	− 29	− 54	174	197
Peru	753	220	29.3	Feb.	107	28	26.0	+ 26	+ 12	269	[4]245
Morocco	698	99	14.2	Jan.	49	11	22.6	+ 1	+ 18	172	235
Trinidad & Tobago	657	115	17.5	.....	.....	.....	.....	+ 21	+ 29	50	78
Costa Rica	350	114	32.7	.....	.....	.....	.....	+ 11	+ 4	15	28

* Compared with preceding 12-month period.
[1] Not available. [2] Less than 0.5 percent. [3] End of January. [4] End of February.
Source: Official trade statistics of listed countries. International Monetary Fund, *International Financial Statistics.*

parts for assembly accounted for a large part of the increase. Similarly, significantly higher deliveries of aircraft, soybeans, and engines to Israel raised its imports from this country by more than one fifth. The United States also took a larger share of the import market in Morocco and in Trinidad-Tobago.

Many other developing nations expanded imports briskly, but boosted purchases from other suppliers more rapidly than from the United States. Nigeria posted the largest import advance of any of the nations shown in the table, as arrivals soared by 42 percent. Those from the United States rose almost as quickly as a result of stepped-up imports of aircraft and machinery. Among the South and East Asian nations, Indonesia recorded imports about one third higher and Taiwan one fifth, but their purchases from the United States rose more slowly.

Reserves gain sharply

As of March 31, official reserves of the 40 U.S. trading partners in the accompanying table had reached $107 billion, 50 percent above their level a year earlier. Developed nations accounted for all but a small portion of the rise. The principal source of the gain was this country's continuing balance of payments deficit. A secondary factor was the shift of official holdings to currencies thought likely to appreciate. The increase also reflected upward changes in the dollar value of reserve assets other than dollars following the realignment of currencies in December. The third allocation of Special Drawing Rights (SDRs) by the International Monetary Fund contributed as well.

Japanese reserves reached $16.7 billion, nearly tripling over their level of March 1971 and accounting for almost one third of the total expansion. With exports rising several times faster than imports, Japan's huge trade surplus was responsible for the bulk of the gain.

Germany added $4 billion to its official holdings bringing the total to almost $20 billion. A continuing strong trade surplus and an inflow of long-term capital, reflecting mainly purchases of German securities by foreigners, were the principal factors. The United Kingdom more than doubled reserves, with increases occurring each month of the period. The British current account remained relatively strong, due to invisible earnings and, to a lesser degree, a merchandise trade surplus. Until recently, capital inflows were also a factor.

France substantially raised holdings through a sizable trade surplus and inflows of capital. The Swiss increase was attributable to a large inflow of funds and proceeds from tourism. Australian and Canadian reserves also benefited from capital inflows, largely investment-oriented, while those of Spain rose on the strength of tourism earnings and workers' remittances.

Among developing countries, Israel and Iran increased their official holdings by nearly $500 million each. Israeli reserves gained by being heavily in marks when that currency was revalued. A better export performance and a sharp increase in tourism helped. Meanwhile, a steep rise in petroleum receipts boosted holdings for Iran.

The drain on the reserves of the South African Republic stopped in recent months as import curbs took effect, but the country sustained a year-to-year loss compared to the preceding 12-month period. Argentina, plagued by inflation, a trade deficit, and a burden of debt, was the heaviest loser of reserve holdings.

HEARING ABOUT TRADE—*At Poland's foreign trade enterprise Polimex-Cekop office, U.S. chemical processing trade mission members listen as officials explain details about doing business there. Left to right: Mission members Robert W. Simon, Eugene Kelly, Director Michael Donohue, Robert Williamson, John Robell; Robert Day of the U.S. Embassy, and the two Polimex officials.*

U.S. Petrochemical Mission Sees Sales In East Europe

Energy needs in Poland and Czechoslovakia are increasing, along with the industrial growth of the two countries. These needs are reflected in the high priority accorded to the petrochemical industry in the State planning councils. Much of the engineering and technical know-how must be purchased abroad and America has an earned reputation for leadership in the field.

Spurred by this market picture, and by recent U.S. licensing and trade liberalization trends, representatives of nine firms from the chemical processing and chemical processing equipment industries visited Warsaw, Krakow, Prague, and Bratislava earlier this year. Their report emphasizes an overall guideline: in both countries, buying and importing are tied into national development plans—and the interest shown in U.S. products and technology can lead to business.

Mission Director Michael Donohue, of the Commerce Department's Office of International Trade Promotion, noted the importance of timing sales presentations to the basic 1971-75 five-year-plans of the two countries.

"Decisions on buying for the petrochemical industry involve large sums of money and are taken over a period of years," he said. "Patience and continued follow-up over an extended time are required but the results can be well worth the effort."

Because of the technical nature of the services offered by the participating firms, a full-day symposium in each country was presented. Officials brought together groups of 40 to 50 carefully selected experts, for whom each mission member presented a technical paper. The papers were scheduled to be published in a Polish technical journal.

Visit plant in Poland

In Poland the group visited Krakow, center of the Polish petroleum industry, and the large petrochemical complex at Plock. The U.S. businessmen had sessions with Polimex-Cekop, the foreign trade enterprise responsible for contract negotiations and importation of complete chemical plants; Petrochemia, responsible for investments and expansion plans in refineries and in the petrochemical industry; the Polish Society of Chemical Engineers, and the Vice Minister of the chemical industry. Japanese and Italians are competing strongly for Polish business, the mission found.

In Czechoslovakia, the group met with the Federal Ministry of Technology, Chamber of Commerce, Chemopetrol, and Slovchemia. For the current five-year plan, major expenditures are almost all committed but vital planning for the next one will begin shortly. Mission members gained some good leads on sales outside the current plan.

Eugene Kelly of Hydrocarbon Research, New York, stated that companies serious about Eastern European sales "must make long-term plans and keep continued contacts with the ministries."

Another approach

Under certain circumstances, joint ventures with other countries offer sales possibilities. Richard McChrystal, representing the Ralph M. Parsons Co., Los Angeles, said that his firm has a new con-

tract with a Czechoslovakian Ministry on such a basis.

Although some of the mission firms had had extensive experience in Eastern Europe, they all agreed with the view of Robert Williamson, representing the Fluor Corp., Los Angeles: "The program of the mission opened doors and gave us access to top officials. It might have taken months to achieve as much on our own."

Other members of the mission, and the firms they represent, were: Arthur Dowling, M. W. Kellogg Co., Div. of Pullman, Inc., Houston; Charles R. McMahan, Procon, Inc., Des Plaines, Ill.; Myrle M. Perkins, Bechtel Corp., San Francisco; John Robell, Badger Co., Cambridge, Mass.; Robert W. Simon, Scientific Design Co., New York; and W. B. Stovall, Crawford & Russell, Inc., Stamford, Conn.

Brisk Far East Construction Pace Stirs Building Materials Mission

Five U.S. exhibitors of building materials and equipment at a recent Bangkok Trade Center show promoted their business interests in other Far East markets as members of a specialized trade mission to the Philippines, Singapore, and Hong Kong.

Construction activity is brisk in all three areas. The mission firms established 11 new agencies or distributorships, and concluded five license agreements. A joint venture arrangement for construction of more than $10 million in regional low-cost housing was negotiated in Singapore. Sales during the next 12 months for the products represented by the mission members—resulting from their contacts in Manila, Singapore, Bangkok, and Hong Kong—are expected to reach $775,000. In addition, licensing arrangements related to low-cost structural techniques were negotiated on about $5 million of local construction.

The mission's market appraisal, by country, points to good business prospects for U.S. suppliers. Mission Director Roderick M. Gillies, of the Commerce Department's Office of Business Services and Executive Director of the Export Expansion Councils, offers the following capsule summaries, with specific comments:

Philippines: industry apace

The Philippine construction industry is well developed and relatively sophisticated. U.S. product orientation remains strong despite keen competition from Japanese and European suppliers. Products featuring advanced technology which will increase productivity and reduce costs are of particular interest to builders and developers.

The Philippine Government has included a flood control project for Manila estimated at 210 million pesos (US $32.6 million). To ease the critical housing shortage, a low-cost public housing program has been planned and 265 million pesos ($41 million) allocated.

"Because of current Government restrictions on foreign exchange availability, joint ventures and licensing arrangements offer good approaches to this market."

Singapore: market growing

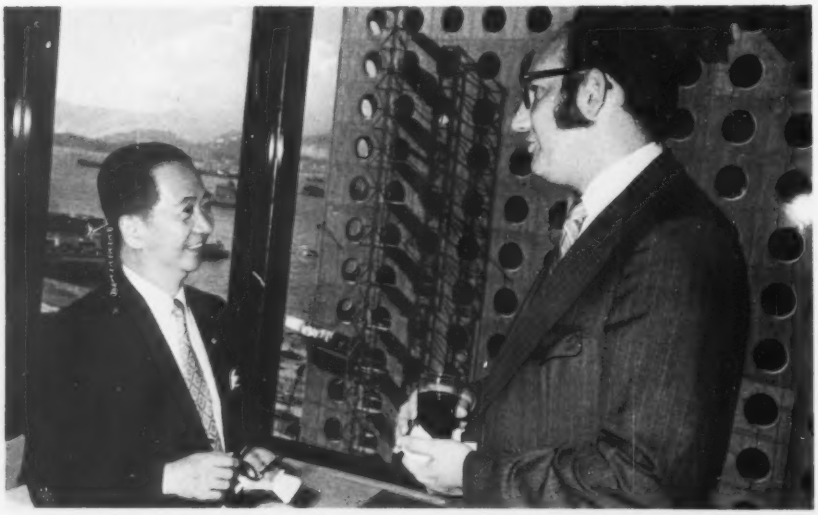
In Singapore, construction, urban renewal, and infrastructure development provide a sizable and growing market for U.S. firms. Demand for public housing outstrips supply and the Government is looking for techniques that might enable it to meet a goal of placing 50 percent of the population in public housing by 1975.

The explosive growth in manufacturing keeps heavy pressure on infrastructure and plant construction. A record $29.5 million is to be spent for new power and water facilities in 1972.

"As an entrepot port, a regional financial center, site of multinational corporation investments and headquarters for numerous sales organizations, Singapore must keep its transport and communications

MEETING WITH THE PRESS—*The day after their arrival in Hong Kong, members of building materials and equipment mission met local media representatives.*

IN MANILA—*Picture above shows Alan F. Haller, right, of Mart Haller, Inc., Coral Gables, providing quotations on air conditioning equipment to a Philippine buyer. In photo at right, Marvin D. Fosse, Hydrotile Machinery Co., Nashua, Iowa, describes his firm's machinery to L. G. Batac, left, board chairman of Baza Enterprises, Manila.*



IN HONG KONG—*Overlooking the harbor, Ross P. Wright, Reed International Sales Co., Erie, Pa., right, discusses trade prospects with a local businessman.*

IN SINGAPORE—*Interested builder, second from left, confers with mission member Ross P. Wright, left, Edward T. Dicker, and Director Roderick Gillies.*

efficient and modern. The Port Authority is investing in warehousing and storage facilities, cargo handling, and servicing operations; and is pushing ahead with construction of a $27 million container port."

Hong Kong: surplus account

With larger revenues derived from increased economic activity, and an accumulated revenue surplus account estimated at $518 million, the Hong Kong Government is planning substantially higher expenditures for public works and utilities and low-cost housing projects. Authorities have recently given qualified approval to a mass transit system that may run as high as $1.1 billion. In the private sector, demand for luxury and middle-income housing, office space and hotel rooms continues to exceed supply. "The market for high-quality and labor-saving building materials and food-handling equipment is exceptionally promising."

Mission members were Edward T. Dicker, Dicker, Stack Sack International, Dallas; Alan F. Haller, Mart Haller, Inc. (combination export manager), Coral Gables; Marvin D. Fosse, Hydrotile Machinery Co., Nashua, Iowa; Alexander Nalle, Challenge-Cook Buildings, Inc., Industry, Calif.; and Ross P. Wright, Reed International Sales Co. (domestic international sales corporation), Erie, Pa.

Product-By-Product Report Explains Tariff Changes As U.K. Enters EEC

Entry of the United Kingdom next Jan. 1 into the European Economic Community means that the U.K. will have to adopt the EEC duty rates on imports from the U.S., and eliminate its duties on imports from the six original EEC countries.

To show how U.K. duty rates will change on a wide range of products of interest to U.S. exporters as a result of these moves, a special report has been prepared by Commerce Department's Western Europe Division. The division is prepared to send U.S. firms copies of the pertinent sections of the report which apply to their particular product.

The report contains correlated U.K.-EEC duty information and related trade data for manufactured products covered by 67 SITC (Standard International Trade Classification) numbers. In 1970, U.K. imports from the U.S. of these products were valued at $1.4 billion, or two thirds of the $2.1 billion worth of total U.K. imports of manufactured products from the United States.

Requests, indicating the product group of interest, should be sent to Western Europe Division, BIC-888, U.S. Department of Commerce, Washington, D.C. 20230.

The 67 product groups covered by the report, with their SITC and BTN (Brussels Tariff Nomenclature) numbers in parentheses, are as follows:

Ammonia (513.61; 28.16); halogenated derivatives of hydrocarbons (512.13; 29.02); nitrile-function compounds (512.76; 29.27); antibiotics (541.3; 29.44); film in rolls, sensitized, unexposed (862.42; 37.02); condensation, polycondensation & poly addition products (581.1; 39.01); polymerization & copolymerization products (581.2; 39.02); articles of plastic (893.0; 39.07); cooperage products (632.2; 44.22); kraft paper & paperboard (641.3; ex48.01); books (892.11; 49.01).

Synthetic yarn, continuous (651.61; ex51.01); knitted fabric (653.7; 60.01); precious & semi-precious stones, excluding diamonds (667.3; ex71.02); ingots, iron or steel, low carbon (672.31; ex73.06); blooms, billets, slabs, etc., iron or steel, low carbon (672.51; 73.07); iron or steel coils for mfg. of sheet, low carbon (672.71; 73.08); nuts, bolts, screws, etc., iron or steel (694.21; 73.32); refined copper (682.12; ex74.01); unwrought aluminum (684.1; ex76.01); aluminum plates, sheet, & strip (684.22; 76.03); interchangeable tools (695.24; 82.05).

Jet & gas turbines for aircraft (711.42; ex84.08); non-aircraft gas turbines (711.6; ex84.08); liquid pumps (719.21; 84.10); air & vacuum pumps, compressors, fans, etc. (719.22; 84.11); refrigerating equipment, nondomestic (719.15; ex84.15); apparatus for treating material with heat or cold, non-domestic (719.19; ex84.17); centrifuges and filtering and purifying machinery (719.23; ex84.18).

Packaging, etc., machinery (719.62; 84.19); lifting & loading machinery (719.31; 84.22); excavating, levelling, boring, etc., machinery (718.42; 84.23); type making & setting machinery (718.22; 84.34); certain textile machinery & parts (717.13; 84.38); sewing machines (717.3; 84.41); metal working machine tools (715.1; 84.45); machine tool parts & accessories (719.54; 84.48).

Non-electric hand tools (719.53; 84.49); calculating, accounting, etc. machines (714.2; 84.52); ADP machines & units thereof (714.3; 84.53); business machine parts (714.92; 84.55); machinery, n.e.c. (719.8; ex84-59); taps, cocks, valves, etc. (719.92; 84.61); ball bearings (719.7; 84.62); transmission shafts, cranks, gears, etc. (719.93; 84.63).

Electric power machinery (722.1; 85.01); telephone & telegraph equipment (724.91; 85.13); telecommunications equipment (724.99; ex85.15); electrical capacitors (729.95; 85.18); electric apparatus for making, breaking, protecting circuits, etc. (722.2; 85.19); semi-conductor devices, tubes, etc. (729.3; 85.21); electrical goods & apparatus, n.e.c. (729.99; ex85.22); insulated wire & cable (723.1; 85.23); insulated electrical fittings (723.22; 85.26).

Motor vehicle parts (732.89; 87.06); aircraft & parts (734; 88.01, .02 & .03); cameras (861.4; 90.07); photographic & photocopying equipment (861.69; 90.10); surveying, etc. instruments (861.91; 90.14); medical equipment (861.71; ex90.17); instruments for measuring, etc., flow, etc. of liquids or gases (861.97; 90.24); electrical or electronic measuring, checking, etc., instruments (729.52; 90.28); measuring, checking, etc., instrument parts (861.99; 90.29).

Phonograph records, tapes, etc. (891.2; 92.12); parts of record players, tape recorders, etc. (891.12; 92.13); hand paintings, etc. (896.01; 99.01); and antiques (896.06; 99.06).

Five More Specialized U.S. Trade Missions To Promote Equipment Sales Abroad This Fall

Five specialized trade missions are being organized to visit markets abroad before the end of the year—bringing to 14 the total of U.S. trade missions announced by the Commerce Department for the second half of 1972 (see also pages 50-52).

Each of the five will represent a different product specialization; three will go to the Middle East, one to Scandinavia, and one to Eastern Europe.

To apply for membership, write: Trade Missions, BIC-940, U.S. Department of Commerce, Washington, D.C., 20230; or phone the project officer named for each new group described below. For each mission listed, the application deadline is Sept. 1.

► The first to depart will be focusing on automotive service equipment. The U.S. businessmen will visit the USSR, Czechoslovakia, and Hungary Oct. 2-13. Phone Richard Eisenmann, 202-967-2396.

► Also leaving in October, a food processing equipment and packaging machinery mission will visit Sweden, Denmark, and Norway Oct. 30-Nov. 10. Wanda Ale, 202-967-3905.

► Companies producing equipment for water purification, sewage disposal, and desalination will be doing business in Iran, Lebanon, and the United Arab Emirates Nov. 10-23. Larry C. Cozart, 202-967-2051.

► Firms producing textile machinery and related products will tour markets in Turkey and Iran Nov. 26-Dec. 11. Larry C. Cozart, 202-967-2051.

► A building and construction equipment mission is scheduled for Kuwait, Saudi Arabia, Bahrain, and Abu Dhabai Nov. 29-Dec. 20. Herbert Socks, 202-967-3904.

Trade Fairs, Centers

Shows Need U.S. Microfilm, Printing, Packaging Items

Information and document storage and retrieval, Germany. The U.S. Department of Commerce is offering American manufacturers of information and document storage and retrieval systems a new opportunity to exhibit and sell their latest products at the European Microfilm Congress in Mainz, Nov. 14-16.

This first microfilm congress on a European level will include a program of speeches, discussions, and social events, as well as a product exhibition. Worldwide participants are expected.

The U.S. exhibit will feature microfilm systems, computer information storage and retrieval systems, and automatic document file systems.

The German market for these types of equipment is expanding faster than the U.S. market—at a rate of 50 percent to 60 percent a year. U.S. manufacturers are supplying about 60 percent of demand.

Three past U.S. Department of Commerce exhibitions at the Frankfurt Trade Center on microfilm, reprographics, documentation, and EDP have realized over $3 million in sales for participating firms.

For details, call Lee W. Swift, Jr. at 202-967-4461, or write him at BIC-946, U.S. Department of Commerce, Washington, D.C. 20230.

Graphic arts and packaging: Brazil. U.S. firms are invited to display their equipment at the U.S. exhibit at an international trade fair at Sao Paulo's Anhembi Park, March 19-25.

Since 1967, when incentives were first implemented, imports of printing and graphic arts equipment and supplies rose from $14.7 million to more than $28 million for 1971, with the U.S. share fluctuating between 34 and 50 percent. For 1971, Brazil's imports of U.S. equipment exceeded $13 million, a 46 percent share. Almost no local manufacturer of printing equipment exists. Most printing equipment is 12 to 15 years old, and a discernible switch to offset is underway. Prospects for increased U.S. sales are at a peak.

In Rio, Sao Paulo, and Brasilia, the packaging industry has literally burgeoned since 1967, when food and drug processors first began to improve technology and increase output. Imports of packaging machinery in that year were some $2.3 million; by 1971 imports totaled more than $9 million, with the U.S. share fluctuating between 28 and 42 percent,

Quantity and quality of local manufacture is insufficient. With the advent of major supermarket chains, now well under way, and the improvement in distribution of food, drugs, cosmetics, and personal care products, tremendous expansion is forecast for the industry and unlimited growth for sophisticated equipment.

For more information, call Franc Manzolillo at 202-967-3752, or write: BIC-960, U.S. Department of Commerce, Washington, D.C. 20230.

Six Exhibitions Invite U.S. Firms

Six upcoming international trade shows are inviting U.S. firms to show their wares.

Environment '73, Sydney, Australia, Feb. 21-25. The show will provide a comprehensive display of equipment, techniques and services for cleaning up the environment. Write: South Pacific Total Concept Exhibitions Pty., P.O. Box 127, Balgowlah, Sydney, N.S.W. 2093, Australia.

ELMIA '73, Jonkoping, Sweden, May 31-June 7. The XIII International ELMIA Fair will feature forestry and construction industry equipment. The Swedish Contractors Assn. will hold its annual congress in conjunction with the fair. Write: ELMIA AB, Box 6066, S-550 06 Jonkoping 6, Sweden.

Canadian Graphic Arts Show, Toronto, Oct. 13-17, 1973. Devoted to the exhibit of machinery, equipment, supplies, services and techniques for printing, publishing and allied industries. The triennial show is held in conjunction with the Graphic Arts Industries Assn. of Canada's convention. Write: Canadian Graphic Arts Show, 481 University Ave., Toronto 2, Ontario (416: 362-5311).

96th Vienna Trade Fair, Austria, Sept. 6-10. More than 30 specialized fairs will be concentrated on the Messegelande Fairground. Write: Austrian Trade Delegates at either 845 Third Ave., N.Y., N.Y. 10022; 3440 Wilshire Blvd., Los Angeles, Cal. 90010; or 332 S. Michigan Ave., Chicago, Ill. 60604.

First International Exhibition of Inventions and New Techniques, Geneva, Switz., Nov. 18-26. Companies and private inventors holding patent rights for new inventions they wish to sell or license, university research departments, and firms dealing in new inventions are invited to attend. Write: Exhibitions Secretariat, PROMEX S.A. 22, rue du Mont Blanc, 1201 Geneva, Switzerland.

INTERMER, Prague, Czechoslovakia, Feb. 26-March 2. This exhibition of electric and electronic measuring instruments is a follow-up to a successful 1972 show. Write: Rapid, 28 Rijna 13, Prague 1, Czechoslovakia, or to Kovo, Trida Dukelskych hrdinu 47, Prague 7.

U.S. Firms Expect Iran Show to Yield $41 Million Sales

U.S. exhibitors rode the magic carpet of success at the special showing of American industrial and medical goods recently sponsored by the Commerce Department in Tehran, Iran. In terms of the size and scope of the exhibit, the results are regarded as the most satisfying for any Commerce-sponsored exhibit overseas to date.

"Excellent effort, well planned, efficiently managed." As if to confirm this judgment by J. D. Marshall International's President Joel Honigberg, the 79 exhibitors made more than $5 million in off-the-floor sales at the recent show of U.S. industrial and medical equipment in Tehran. Further, they expect to sell another $36.3 million in Iran during the year following the exhibition.

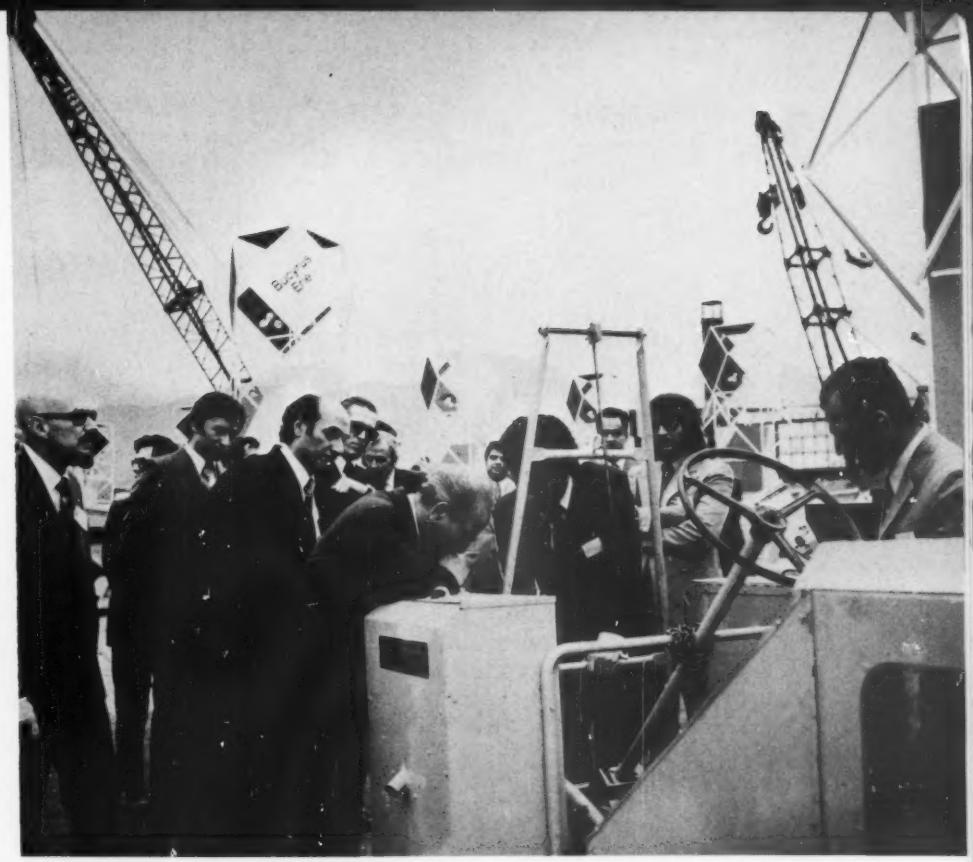
A total of 4,360 visitors registered at the week-long show.

Construction equipment move

Products in the heavy construction industry were the best sellers, with anticipated sales of more than $15 million in the coming year, including $10 million by a single exhibitor, Bucyrus Erie. Other product categories with strong expected sales included: medical and dental, $4.1 million; textile equipment, $3.7 million; traffic controls, $3.1 million; agribusiness, $3 million; business machines, $2.6 million; heating and cooling equipment, $2.1 million; and automotive tools, $2 million.

U.S. Commercial Officers from Afghanistan, Kuwait and Saudi Arabia were invited, and assisted visitors from these countries.

Nineteen of the exhibitors were seeking representatives in Iran and neighboring countries. A total of 34 agreements were signed during the exhibition and negotiations were begun with another 29.



WIDE OPEN SPACES—*Exhibitors of construction machinery had plenty of room to display their products outside the hall, and sales expectations of $15 million in the coming year show that they made good use of it.*

GOOD CAUSE TO CELEBRATE—*The staff at the J. D. Marshall Co. exhibit has plenty of reason to be happy . . . they're taking part in the most rewarding exhibit, in terms of return per expenditure, ever sponsored by the Commerce Department.*

'. . . AND IT COMES OUT HERE'—*Alfred Gruss and Howard May of B. Freudenberg, Inc., right and left center, explain an E. W. Barton Co. capacitor winding machine to prospective buyers at the Poznan Trade Fair.*

Poznan Opening E. Europe Markets To U.S. Exhibitors

The U.S. Commercial Exhibition at Poznan's annual International Trade Fair is becoming one of the bright spots for U.S. firms trying to market their goods in Eastern Europe. This year's show was the second at which the U.S. has maintained a commercial exhibit.

"Of the five main Government agencies that I wanted to contact, representatives of all came," said an enthusiastic S. L. Babbitt, international marketing manager for Transmation Inc. of Rochester.

"We achieved our firm's objective—the first direct exposure to a potential new market," said John Mitchell, regional manager for ITT Barton. "I estimate that our participation has cut the expected time to penetrate the market by as much as one year."

"The commercial part of this pavilion was very well organized. We want to come back," was the evaluation of Rolf Boerger, the XOMOX Corp.'s technical manager in Germany.

The ten U.S. exhibitors made floor sales of $53,000 for the 17 firms represented, and expect another $656,000 in sales during the next twelve months as a result of their participation in Poland's main international trade event.

Six exhibitors were seeking representation; two agents were appointed during the show and talks were begun with four more.

An estimated 120,000 people visited the U.S. pavilion. The 529 registered trade visitors produced a total of 645 sales leads for the participants.

German Buyers Receptive To U.S. Electronics Items

Resumed growth in Europe's largest electronics market led to solid sales leads for the 65 U.S. firms exhibiting at the Passive and Electromechanical Electronic Components show at the Frankfurt Trade Center. Immediate sales during the exhibition totaled $107,020, and another $1,692,300 in sales are predicted for the next 12 months.

More than 450 specialists from all over Germany came to the June show to see the latest connectors, capacitors, relays, keyboards, indicator lights, and other components available from U.S. suppliers.

Particularly successful were the new-to-market firms, which found during the show the agency leads necessary to establish themselves in this market. Two agents were signed during the show, and negotiations were begun with another thirteen prospects.

As Phelps Wood, President of E-Z Hook, a new-to-market firm, put it: "Exhibition allows the manufacturer to determine prior to the appointment of an agent or distributor whether there is an adequate market and at what price the product can be sold."

'WATCH CLOSELY, PLEASE'—*Robert Luethard (left), Swiss distributor of E-Z Hook Test Products, explains use of bread board clips for electronic testing to German engineers at Frankfurt U.S. Trade Center.*

Worldwide Business Outlook

Falling World Prices For Its Exports Dampen Malaysia's Economic Mood

Malaysia's economic prospects for the rest of 1972 do not appear to the U.S. Embassy in Kuala Lumpur to be any better than those that produced the rather disappointing growth recorded last year.

Falling international prices for most of Malaysia's basic commodity exports (rubber, tin, and timber) last year served to dampen the nation's economic picture considerably. Although a decade ago this development might have been disastrous for Malaysia, the nation's economy continued to expand, though at a lower rate than hoped for under the Second Malaysia Plan. Total export value fell slightly, but the country's merchandise balance was, as usual, favorable. Malaysia's balance of payments showed a larger surplus than that of 1970, mainly because of a net inflow of long-term capital.

Promoting tourism

Public spending, as programs under the Second Malaysia Plan were implemented, did much to sustain the growth rate and the initial impact of the country's industrialization policies are beginning to be felt. Malaysia is also increasing its efforts to attract foreign tourists to partly offset lower export earnings from primary products.

An improvement in the natural rubber market would considerably improve prospects in Malaysia, but as the immediate outlook for natural rubber prices on the international market is not bullish, the Malaysian economy may have to seek remedies elsewhere.

One cause of hope for a brighter economic picture this year is that the multiplier effect of public sector participation will be more strongly felt in 1972 than last year. A large portion of federal government lending to government agencies and public corporations was not spent by these bodies, but should make an impact before the end of this year.

Malaysia's efforts at industrialization are also beginning to bear some fruit. The final objective in the nation's economic development —the scaling down of dependence on export of a few raw materials —is still some distance away, but an encouraging start has been made. Malaysia has turned from an industrial policy of import substitution to a more aggressive one of export orientation. During 1971 the Government specifically singled out the electronics industry for attention and took measures to promote it.

Malaysian exports of manufactured goods are still predominantly unsophisticated items involving mainly primary products, but there are signs of change. The Central Bank of Malaysia is optimistic for continuing growth in the export field by manufacturing industries and expects they will gradually be important enough to make up for the loss from a slower growth of primary export earnings.

However, it is not likely that public spending or increased manufacturing activity will have sufficient impact this year to offset the generally poor market conditions presently prevailing for Malaysia's primary products. With rubber prices now hovering near a 30-year low, perhaps the best the nation's economy can hope for in 1972 is to do as well as it did last year.

The outlook for the remainder of 1972 is much the same as was recorded in 1971—reduced export earnings and a sluggish, less than anticipated growth rate.

Total U.S. exports into West Malaysia fell from $98.9 million in 1970 to $73.9 million in 1971 and the U.S. percentage of imports into all of Malaysia dipped from 8.5 percent in 1970 to 6.7 percent in 1971. This decline reflected the general uncompetitiveness that required the U.S. dollar revaluation and can be partly explained also by three factors:

► The virtual stagnation of Malaysian imports in 1971;

► The prolonged dock strikes in the United States; and

► The unusually high U.S. export figures in 1970 arising from the purchase of four aircraft valued at $19.4 million by Malaysia-Singapore Airline which were included in Malaysia's 1970 import figures.

However, it is disturbing that U.S. exports should have fallen so much when it is considered that:

► Although Malaysian imports generally stagnated, imports of investment goods, including machinery and transport equipment, areas where the United States is most competitive, expanded by 10.3 percent.

► The dock strike cannot be held responsible for such a large drop—at any rate it should have been a two-way street but the volume of Malaysian exports to the United States fell only slightly.

► Even after subtracting the total cost of the aircraft from 1970 accounts there is still a large drop in U.S. exports between 1970 and 1971.

Others increase exports

Other major industrial nations such as Japan and the United Kingdom increased the value of their exports to Malaysia by 6.9 percent last year and thus, especially in areas of machinery needing replacement parts, these nations have gained an inside track from U.S. firms in supplying the needs of the Second Malaysia Plan and the initial phases of Malaysian industrialization.

U.S. suppliers should not neglect

MALAYSIAN INVESTMENT INCENTIVE—*Investors can locate in any of 11 industrial parks carved out of the Malaysian jungle. This is Batu Tiga, one of the newest.*

the Malaysian market. Although there will probably be lesser demand for consumer items, Malaysian imports of goods such as machinery and transport equipment should again increase this year. These are largely items in which the United States is highly competitive and U.S. exporters willing to make the effort should be able to regain lost ground.

One of the best opportunities for direct exports of U.S. goods or services is in public spending, as the Government continues to implement the programs of the Second Malaysia Plan. In the past, response to public tenders from U.S. firms has been disappointing.

As a result of the currency realignments the United States is more competitive in many fields where the Government of Malaysia is asking for international tenders. For example, the Government is asking international bids for such items as hospital equipment, communications equipment and earthmoving equipment, all areas in which U.S. bids could well compete with bids from other industrialized countries.

The Government of Malaysia in deciding on bids often places as much emphasis on the terms of financing as on the price. U.S. firms competing for international tenders from Malaysia may find it advantageous, therefore, to accompany their bids with a preliminary commitment from the Export-Import Bank. These commitments are available for most projects and can usually be obtained quickly and at no cost.

Malaysia, with its record of stability in finances, prices and government, and availability of raw materials and labor, continues to offer an attractive atmosphere for foreign investors. The Government, however, is becoming more selective in the types of industries to which it will grant incentives, and is interested chiefly in attracting labor-intensive, export-oriented operations.

Foreign investment that meets these criteria should find the Government most receptive and cooperative. For example, three large U.S. electronics firms were recently granted pioneer status for manufacture of components produced exclusively for export. One of these firms went from date of application to actual production in the record time of 60 days when the state development corporation made available a state-constructed plant built to the specifications of the investor. Two U.S. electronics firms in Malaysia plan to triple production facilities as soon as physically possible. There are also good opportunities for investment in tourist-related industries.

Pressure From Consumers Causes Shift In Chilean Import Structure

The structure of Chilean imports is shifting, according to David R. Patterson, Commercial Officer at the U.S. Embassy in Santiago, due in part to the Chilean Government's program to redistribute income, reduce unemployment and reactivate the economy, which had operated below capacity during 1970.

Wage increases in 1971 that ranged from 35-50 percent, a relatively low level of inflation (22.1 percent in 1971 compared with 34.9 percent in 1970) and a 114 percent increase in money supply all combined to produce an upsurge in effective consumer demand.

This high demand affected imports in two ways: by stimulating Chilean industry to work near full capacity, it required increased imports of industrial raw materials and intermediate goods, and it necessitated larger imports of foodstuffs and other consumer items.

Such increases, of course, reduced availability of foreign exchange for capital goods imports. The shift in trade away from machinery in itself severely affected U.S. exports to Chile, for the United States has for many years supplied well over half of Chile's machinery needs.

Over and above the structural change, however, the Chilean Gov-

ernment is seeking alternative sources of supply in Western and Eastern Europe.

U.S. exports to Chile in 1971 totaled $223.7 million (f.a.s.), down from $300.3 million in 1970 and $314 million in 1969. U.S. export data for the first five months of 1972 indicate a further drop of about four percent from the 1971 level.

In 1971 the chief beneficiaries of Chile's increased imports of food and raw materials were trading partners in LAFTA (e.g. Argentine beef, Brazilian and Mexican cotton), Australia, New Zealand, and certain European suppliers of agricultural commodities, principally Denmark and Holland. This trend is likely to continue in 1972. Australia and New Zealand have provided credit for agricultural commodities this year.

Imports buses, taxis

Chile has also turned to Argentina and Brazil in 1972 to supply its transportation needs, importing Argentine Chevrolets for taxis and Mercedes Benz buses from Brazil. Import registrations for transportation equipment in the first two months of 1972 rose by more than 84 percent over the same period of 1971, probably because of these buses and taxis. At the same time, import registrations for parts and accessories for transportation fell by 72 percent.

In 1971, import registrations for transportation equipment were bolstered by $30.5 million in railroad equipment and parts (compared with $2.5 million in 1970), rolling stock mostly from Japan, and by track-type tractors ($8.1 million, up from $5.9 million in 1970). Except for parts and pieces, all other types of transportation material were down in 1971 as compared with 1970.

Japan enjoyed continued success in its efforts to increase exports to Chile in 1971. According to official Japanese figures, exports to Chile totaled $44.3 million in 1971, up from $31.4 million (f.o.b.) in 1970. However, Japan's bilateral trade deficit with Chile remains larger: Japanese imports from Chile rose from $212.4 million in 1970 to $243.3 million in 1971 (Japanese Customs figures).

CHILEANS DEMAND MORE CONSUMER GOODS—*Wage increases, some slowdown in inflation, and a bigger money supply are boosting these Santiagans' demands.*

A number of factors continue to make Chile an important market for U.S. exporters, and the United States continues to be Chile's largest single supplier. Demand for U.S. spare parts remains strong.

U.S. agricultural commodities may also find a market in Chile; up to May 1 the Chilean Government had contracted for 147,000 metric tons of U.S. corn. Possibilities appear to exist for sales of U.S. chickens and eggs for the poultry industry.

A growing plastics industry, spurred by Chile's new petrochemical capacity, will be interested in U.S. machinery. U.S. medical and hospital equipment is preferred by many Chilean doctors. In general, there is an accumulated backlog of demand for capital goods for both mining and industry.

Prospective exporters to Chile should be aware of two characteristics of the Chilean market: 1) important orders will in many cases require credit; and 2) there is a growing probability that the customer will be a government agency or firm. Private sector import registrations increased from only $629 million in 1970 to $651 million in 1971, while public sector imports increased from $319 million to $515 million. Private imports will probably fall relatively and absolutely in 1972.

The direction and the magnitude of Chile's foreign trade over the coming year will depend on how well the Government is able to meet pressing problems related to a high rate of inflation, shortage of foreign exchange, and economic dislocations resulting from internal political-economic policies. The rapidly evolving character of the market means that exporters will need to keep in close touch with their representatives and other local information sources to evaluate properly current market conditions.

Burundi, Buoyed By Coffee Income, Capable Of Buying More U.S. Goods

Two excellent coffee crops in a row have buoyed Burundi's economy despite falling coffee prices last year.

Coffee quotas will eventually have a braking influence on the economy of this Central African nation, but the U.S. Embassy in Bujumbura expects the present comparatively high level of general economic activity to continue at least through the rest of this year.

During recent years, U.S. exports to Burundi have generally run between $1 and 1.5 million per year, or roughly 6 percent of Burundi's annual imports. In 1969 the figure fell to 4.6 percent, but it rose slightly to 5 percent in 1970. Later figures are not available.

Imports from U.S. benefit

The devaluation of the Burundi franc along with the dollar should give U.S. imports a more favorable position this year than they have had in the past, assuming that Americans are willing to sell aggressively. The largest export from the United States to Burundi continues to be used clothing ($375,000 in 1970 compared with $395,000 in 1969). Motors and spare parts were second at almost $300,000 in 1970.

Much of Burundi's commerce on the import side remains in the hands of Belgian and Greek businessmen who are particularly oriented towards European suppliers. Common market countries supplied 57 percent of Burundi's imports in 1970. Belgium's share has been declining and that of France rising. Japan, with 13 percent of the market in 1970, was second only to Belgium and sold as much to Burundi as all the non-Common Market countries of Europe put together. Her major exports to Burundi have been textiles and light machinery goods.

Thus, it is clear despite Japanese inroads, the Burundi market is traditionally tied to Europe ,and particularly to Belgium. These ties have been cemented by an average 6 percent "reverse preference" tariff that has served as a barrier to American exports. Since EEC countries are the largest aid donors to Burundi outside of the UN system, it is unlikely that this trade barrier will be removed in the near future.

Several other factors have also adversely affected American exports. Merchants have balked at the initial comparatively high cost of many American goods and the resulting higher duties on them which must be passed on to the purchaser. The Burundi Government levies higher import duties on high horsepower vehicles than on typical smaller European cars. Delivery time from the United States is frequently longer than from Europe or even from Japan. This problem has increased in the past year as ships coming from the United States have all too often offloaded goods bound for Burundi at ports other than Dar es Salaam in order to avoid long delays outside the port. As a result, a number of months have often been added to shipping time.

Nevertheless, as the case of Japan demonstrates, good products are welcome in Burundi from other than traditional exporters. The world-wide monetary reforms at the end of 1971 have made goods from Burundi's traditional suppliers almost 10 percent more expensive in terms of the devalued Burundi franc than before the devaluation. In essence, the advantage afforded European exporters by reverse preferences has been removed.

American businessmen would do well to examine the new competitive situation despite the small size of the market. Major import categories by order of importance are normally cloth, food, primary goods for industries, and machines and tools. This pattern is apt to remain.

The World Bank may soon finance the improvement of the road running along Lake Tanganyika and the construction of a small hydroelectric installation near Bujumbura, providing possible opportunities for the sale of limited amounts of earthmoving as well as generating equipment. However, most major export opportunities tied to new projects are also tied to bilateral foreign aid coming from European countries.

American investors have not been interested in Burundi in the past for a number of reasons including a generally limited economy, lack of skilled manpower, high initial overhead investment costs, lack of local capital, isolation from markets, and weak transportation. Efforts are being made to make Burundi more attractive to investors, but none of the impediments listed above are likely to be removed in the near future.

An interesting outside chance for American importers and investors is the possibility that the United Nations Development Program's mineralogical survey of Burundi, under way since 1969 and expected to continue for perhaps several more years, may discover mineral deposits of commercial value. At present, Burundi exports only limited amounts of bastnaesite and cassiterite.

Hotel considered

One investment possibility of importance is construction of a first-class hotel. Local capital is available for a portion of the initial investment. More may come from Europe. A willingness to undertake a reasonable investment would help to secure the right firm a man-

BUJUMBURA PORT—*Expansion of Burundi's foreign trade is spurring adoption of modern cargo handling methods. Bujumbura Port gets its first container.*

agement contract of potential value. Burundi is very anxious to develop tourism and might well become a stop on a Central African circuit. At present the question of a hotel and broader tourist development is being studied.

Liberal code

Incentives to invest in Burundi include a liberal investment code enacted in 1967 and a large potential pool of inexpensive labor. An Investment Guarantee Agreement between Burundi and the United States was signed in 1969. Despite some traditional tensions between the ruling minority tribe and the majority tribe in Burundi, which would not likely affect foreign businessmen to any great extent, Burundi has had more than five years of stable government under Colonel Michel Micombero who came to power in late 1966 and has been President ever since. Several thousand foreigners are resident in Bujumbura, and commercial and industrial activities are still largely in their hands.

Burundi's economic potential, including its under-utilized industrial capacity, would very likely be more fully realized if Burundi eventually becomes integrated into the more lively economies of either East Africa or Zaire.

Burundi applied for membership in the East African community in 1967, but progress towards any form of meaningful membership has been painfully slow. A series of tripartite meetings among Burundi, Rwanda and Zaire has taken place but the movement towards greater coordination, if not integration, is still at a basic stage.

As a single economy, Burundi will probably remain of only limited interest to American traders and investors. As part of a greater regional economic union, it might well be more attractive as a market, as a source of labor at very competitive terms and as a crossroads between the larger East African and Zairian markets.

Whatever the outcome, American companies wishing to do business in Burundi should be prepared to send French-speaking representatives at regular intervals to Bujumbura if they wish to capture a reasonable proportion of present or future markets.

Togo Is Benefiting From Four Years Of Steady Growth

Togo is celebrating 12 years of independence and nearly four years of steady economic growth, reports the U.S. Embassy in Lome.

Last year, on the whole, was a good one for this little West African nation, with record earnings by cash crop producers, a new high in phosphate production, record wholesale and retail sales, and a record level of construction activities. The local industrial sector, while still quite modest, has shared in the overall growth. Substantial amounts of foreign aid and investment have found their way into Togo in recent years. However, overall cash crop production is expected to decline substantially in 1972.

Moreover, Togo's continued heavy dependence upon three primary commodities continues to expose the country's economy to the whims of the world market. Because of declining cocoa prices the value of Togo's export trade dropped in 1971, while imports rose to record levels, causing a sharp increase in Togo's unfavorable trade balance.

Cocoa prices improve

Growing unemployment and a sharp increase in the cost of living in Togo are also serious if not critical problems. Nevertheless, recent improvements in cocoa prices, steady growth in phosphate production and an apparent easing of

the recently imposed Ghanaian trade controls are promising factors.

Given Togo's political stability, nondiscriminatory tariff and trade policy, and a highly favorable attitude toward foreign and domestic private investments, Togo offers some attractive prospects to foreign companies interested in investment or trade in West Africa.

Open door policy

American goods compete freely on the Togolese market on even terms with products from all other countries. Togo, unlike most other African states associated with the EEC, proudly maintains its "open door" trade policies and refuses to set up preferential duties or reverse preferences in favor of any country or group of countries.

This liberal policy has doubtlessly been a factor, as has been the reputation for quality which American goods enjoy, in enabling the United States to steadily improve its modest export trade with this small but dynamic francophone country. While registering only a slight increase (0.7 percent) over 1970 sales, U.S. exports to Togo still reached a record $3.72 million. Moreover, the United States, which provided 5.3 percent of Togo's total imports in 1971, edged out Japan to become fifth among Togo's suppliers.

Among the more important categories of U.S. exports to Togo are heavy equipment and excavating machines, used clothing and cloth remnants, electrical supplies, tractors, and food products. Despite a slight drop in sales in 1971, the market for U.S. heavy equipment in the long run should be increasingly good as development projects multiply. The growth of the market for American used clothing and cloth remnants shows promise of continuing.

American sales to Togo of electrical materials jumped six-fold in 1971, thanks to an Export-Import Bank loan to Togo for use in purchasing materials to modernize the Lome electrical distribution system. Further expansion of the electrical distribution system may open the way for increased sales of American electrical supplies.

Other U.S. products which are sold in relatively large quantities in Togo include tractors of various kinds and raw and manufactured tobacco products. U.S. sales of air-conditioning supplies, pharmaceutical products, optical and surgical equipment, and steel pipes, while still at modest levels, registered gains in 1971.

While the above listed commodities remain the mainstay of U.S. export trade with Togo, other areas are beginning to show some promise as well. The Togolese effort to create small and medium industries should open up markets for plant equipment. (Already, a small detergent factory and a paint manufacturing plant in Togo have purchased their plant equipment from U.S. sources.) A proposed U.S. loan to the Council of the Entente for use by the development banks in the Entente states (Togo, Dahomey, Ivory Coast, Niger, and Upper Volta) would give a solid boost to this undertaking and further open the way for additional U.S. sales in Togo.

U.S. presence significant

Togolese authorities are keenly interested in attracting U.S. private investments, and while still relatively modest in terms of total value, the American presence is significant by Togolese standards. The W. R. Grace Corp. with its 37 percent interest in the C.T.M.B. phosphate company is by far the biggest U.S. investor in Togo. The Ashland Oil and Refinery Co., in partnership with Amerada Petroleum Corp. and the Frontier Oil Co., has also made substantial investments in petroleum exploration activities in Togo's offshore areas, including the drilling of two wells to date, the results of which have not yet been made public.

Romex-Togo, in which the American firm Romerovski Brothers, Roselle Park, N.J., hold an estimated 40 percent interest, is currently manufacturing new clothing (pants, shirts, uniforms) in addition to handling used clothing. On the banking and financial side, First National City Bank has a 49 percent interest in the French-based Banque Internationale pour l'Afrique Occidentale (B.I.A.O.) which operates in Togo as well as other countries throughout West and Central Africa. Other important U.S. investments include Mobil and Texaco service station chains.

Advantages for investors

Togo does have some investment potential which could attract imaginative U.S. companies. As a convenient center for servicing regional markets in West Africa, Togo offers a small but efficient and modern port, a free port zone, a very favorable investment code, a business-minded government and a pool of skilled and talented manpower. Moreover, Togolese road and telecommunication links with neighboring countries are undergoing steady improvements.

American investors might consider establishing companies in the free port zone which could fabricate goods for the West and Central African markets. Other potential projects might include operations which transform Togolese raw materials (phosphates, cocoa, coffee, palm kernels, fish, fruits and vegetables) into semi-finished or finished goods for export. Cocoa butter, cookies, canned fish, pineapples, or tomatoes, manioc chips for cattle food, and frozen shrimp are possibilities.

Tourist facilities are also another consideration. With the recent construction of the convention center, the easy access to touristic sites in Ghana and Dahomey, and the good Togolese beaches, Togo is hopeful that tourists will be attracted in increasing numbers.

International Business Reports

The Product Life Cycle and International Trade. Edited by Louis T. Wells, Jr., Harvard University. 259 pp. $3.

This book brings together some of the research into what is generally called the "product life cycle model" theory of international trade. The first paper provides a brief history of the development of the product life cycle trade models. It gives a summary of the findings of empirical research, reviews contributions of major writers in the field, and relates the product life cycle theory to some of the other recent propositions offered to explain international trade in manufactured goods. Part I presents empirical studies of trade in particular industries. Part II presents country studies of trade.

Write: Division of Research, Harvard Business School, Ayer Bldg., Lawrence, Mass. 01843.

The Japanese Steel Industry, With an Analysis of the U.S. Steel Import Problem. By Kiyoshi Kawahito. 203pp.

This study opens by surveying the postwar history of the Japanese steel industry, to 1960. Part II analyzes such facets of the contemporary industry as production, markets, raw materials, distribution, pricing, finance, labor costs, and productivity. Then, in Part III, a computer model is presented to explain the earlier pattern of the steel trade between the United States and Japan quantitatively and to project the trend to 1975 under a variety of assumptions.

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

Economic Survey on France. Published by the Organization for Economic Cooperation and Development. 83 pp. $1.

The first of three sections reviews the general problems connected with the objectives chosen for France's Sixth Plan. This includes a discussion of price and employment problems and policy. The second part discusses recent economic trends and short-term prospects focusing on continuation of expansion, balance of payments position, inflationary pressures, and main features of the economic policy. In light of these two sections, the third and final section provides an assessment of economic policies.

In addition to an extensive statistical annex, the survey contains a summary of economic policy measures taken since the beginning of 1971, including sections on incomes, exchange controls, and employment.

Write: OECD Publications Center, Suite 1305, 1750 Pennsylvania Avenue, NW., Washington, D.C. 20006.

Directory of Louisiana Importers and Exporters. Published by the Louisiana State University in New Orleans. 148 pp. $7.50.

This directory is part of a long-range project to produce a Louisiana International Trade Directory including Louisiana manufacturers involved in or wishing to enter the foreign market and service companies necessary to service foreign trade through Louisiana, as well as Louisiana importers and exporters.

Contents of this publication are Alphabetical List of Products, Products Imported into Louisiana by SIC Number, Louisiana Products for Export by SIC Number, and Alphabetical List of Louisiana Importers and Exporters.

Write: LSUNO, Lawefront, New Orleans, La. 70122.

Survey of Investment Funds 1972. 378 pp. $11. Survey of Oils 1972. 226 pp. $10. Published by the Financial Post, Toronto.

The first listed publication is a handbook on Canadian mutual funds, closed-end investment trusts, investment funds and pooled pension funds operated by trust companies and life insurance companies. There is also a section on investment management companies whose shares are publicly owned.

The Survey of Oils is the 30th edition of an annual reference book on the Canadian oil and gas industry. A feature of this year's edition is an article dealing with exploration, development and marketing highlights. Also included are statistical tables, lists of operating refineries and gas processing plants, a seven-year table of stock prices, and maps outlining petroleum industry activity in Canada.

Write: The Financial Post, 481 University Ave., Toronto 101, Canada.

Calendar For World Traders

Aug. 9, 10— New Orleans—Albert Zucca, Commercial Attache, Nairobi, available for consultation, Field Office.

Aug. 14 — Seattle — U.S.-USSR Trade Seminar, World Trade Club of Seattle. Washington Athletic Club, 9 a.m.

Aug. 14-16 — Washington, D.C. — Seminar on Business-Government Relations in Intl. Trade and Investment, Georgetown U.

Aug. 15-16 — Chicago — George E. Mayer, Commercial Attache, Thailand going to Turkey, available for consultation, Field Office.

Aug. 24—Chicago—Paul W. Aylward, Jr., Economic/Commercial Officer, Montreal, available for consultation, Field Office.

Sept. 7 — Cleveland — Cleveland World Trade Assn. monthly luncheon, Mid-Day Club.

Aug. 16—Chicago—Midwest Credit Management Assn. meeting.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine. The section that follows presents details about U.S.-sponsored overseas exhibitions and missions, licensing and joint venture proposals, opportunities to sell to foreign firms and government agencies and appoint agents, details on major construction and expansion projects and notices of U.S. visits by foreign buyers.

U.S. Promotions Overseas

UNITED KINGDOM. Materials for the Electronics Industry. The final Kennedy Round tariff reductions and Britain's eventual entry into the Common Market are causing significant structural changes within the electronics industry. To remain competitive in domestic and foreign markets, electronics firms are upgrading their R&D programs and actively seeking new production techniques, materials and applications. Consumption of electronics materials reached an estimated $160 million in 1970 and is projected to increase substantially in the next four years. Call George Kemp, 202-967-3088. London Trade Center, Sept. 18-22.

BRAZIL-VENEZUELA. Hospital Medical Equipment Mission-Seminar. Approximately 12 industry representatives and 4 prominent speakers will participate. In both countries, ministries of health, social security, public works, and the military are embarked upon multi-million dollar hospital and health facility expansion and modernization programs. As there is very limited local manufacture, annual imports are high. Venezuela is importing some $13 million and Brazil almost $20 million. Combined equipment needs of these countries, over the next five years, are forecast at over $500 million. Call Lee Carteron, 202-967-2051. Caracas, Sept. 11-13; Rio, Sept. 14-18; and Sao Paulo, Sept. 19-22.

BAHAMAS, HAITI AND SANTO DOMINGO. Hotel and Catering Equipment Trade Mission. A steadily expanding tourist industry provides American firms unique sales opportunities for the following product categories: Air conditioning, food service, janitorial, grounds keeping, laundry and dry-cleaning, leisure time, security, and office machines. Call Andre Williams, 202-967-4228. Sept. 19-29.

GREECE, ISRAEL AND CYPRUS. Tourist Industry Services and Equipment Trade Mission. Growth of Israel's tourist industry has been called "stupendous" by its Ministry of Tourism, while tourist population in Greece is expected to equal the country's own population within this decade. Cyprus too has been capitalizing on its Mediterranean location to earn foreign exchange. Needed are labor-saving devices for the service industries, franchising operations, all types of recreation equipment plus the know-how to build, operate and manage tourist facilities. Call Fred E. Crosley, Jr., 202-967-2232. September.

UNITED KINGDOM. U.S. Packaging Exhibition, PAKEX 72. British consumption of packaging machinery and equipment was $81.5 million in 1970; by 1975, it will be an estimated $112 million. British imports of packaging machinery in 1970 totaled $31.9 million, of which $8.3 million came from the United States. British demands will increase rapidly for sophisticated, high-speed machinery. U.S. equipment is well regarded. Call Bill Gaines, 202-967-4073. PAKEX 72, Oct. 9-13.

ITALY. Metals, Metal Processing and Production, and Technical Metallurgy Equipment. Italy's 1972 market for this equipment is valued at $273 million and domestic producers are expected to satisfy less than half. Consequently, technologically advanced and other locally unavailable equipment and supplies will be imported. U.S. high technology equipment and materials are considered by most Italian experts to be 5-7 years ahead of most available products and are therefore in high demand. Call Gus Duda, 202-967-2434. Milan Trade Center, Oct. 10-14.

ARGENTINA. Instrumento Expo-72. This will be an insrument and systems exhibition. Featured equipment will include industrial process, analytical, and electro measuring instrumentation. Argentina's imports of intruments and systems reached a record $19 million during 1971, with U.S. suppliers accounting for some 50 percent. By 1975, import demand is expected to double, as local producers will still be unale to produce sophisticated instrumentation required by Argentina's rapidly growing process industries; total instrumentation sales, including imports, should surpass $46 million by 1975. Call Franc Manzolillo, 202-967-3752. U.S. Regional Trade Center, Buenos Aires, Oct. 16-20.

FRANCE. Material Handling Equipment. The market for this equipment in France is estimated at $605 million. Sales over the past three years have shown a consistent annual increase of not less than 10 percent, with some categories registering gains of 30 to 50 percent. The Sixth Economic Plan for 1971-75 estimates an average annual increase of 13 percent during the period. Domestic production will not fully satisfy this demand. France relies on imports for about 20 percent of total consumption. Call John L. Wolf, 202-967-4974. Paris Trade Center, Oct. 16-20.

MEXICO. Graphic Arts Machinery and Equipment Exhibition. The printing and graphic arts industry in Mexico is upgrading its capabilities and looks to the United States as the primary source for new equipment. U.S. sales were $8.8 million in 1970, and rose 10 percent in 1971. A wide range of equipment will be featured at this event in the most important Latin American market. Call James L. Blow, 202-967-4311. Mexico City Trade Center, Oct. 16-20.

VENEZUELA. Advanced Business Machinery. Venezuela, with a $10 billion GNP and a 6 percent annual growth rate, is one of the leading Latin American markets for U.S. equipment. Demand for business machines is high. The U.S. share of the market for EDP and other business machines is 35 percent and is expected to keep pace with market growth of about 12 percent annually. The Venezuelan liquidity position is good. Call Porter Clary, 202-967-4652. U.S. Solo Exhibition, Caracas. Oct. 24-28.

WEST GERMANY. Analytical Instruments. The outlook for the German chemical industry is for 70 percent growth in production by 1975. The $35 million market for analytical instruments has doubled in volume since 1968. Expenditures for R&D continue to keep pace with industry growth. Outlays by the chemical industry currently account for an estimated 30 percent of R&D expenditures by all German industry. Call John R. Crown, 202-967-4421. Frankfurt Trade Center, Oct. 23-27.

SCANDINAVIA—Sweden, Denmark and Norway. Food Processing and Packaging Machinery and Equipment Trade Mission. These countries appear to be good prospects for modern automated equipment, especially in the processing and packaging of meat for export and of specialty and convenience foods, which are the fastest moving sectors of the Scandinavian food market. Membership will be limited to 12 U.S. firms. Deadline for application is Sept. 1. Call Wanda Ale, 202-967-3905 Oct. 30-Nov. 10.

USSR, CZECHOSLOVAKIA, HUNGARY. Automotive Service Equipment Trade Mission. The automotive industry is one of the fastest growing in the USSR, enjoying top priority in the current five-year plan. This mission will begin basic relationships and pinpoint the specific equipment mission members and the colleagues should exhibit in the May-June '73 Auto-service Exhibition in Moscow. Two of the other countries are automobile producers and two enjoy a large

wheeled tourism requiring improved servicing facilities. Call Richard Eisenmann, 202-967-2396. Oct. 2-13.

JAPAN. Foundry Equipment and Supplies Trade Mission. This Mission will be going to Tokyo and Osaka. Display facilities will be available at the U.S. Tokyo Trade Center and the U.S. Consulate General in Osaka. Deadline for applications is Sept. 1. Call Andre Williams, 202-967-4228. Oct. 29-Nov. 3.

CZECHOSLOVAKIA, POLAND AND AUSTRIA. Environmental Protection Seminar and Trade Mission. A convening of environmental experts in Czechoslovakia will afford American companies excellent opportunities to respond to invitations from that country's government and thereby make contact with influential engineers and purchasing authorities. Poland is now doubly important owing to its role as coordinator of the Comecon pollution protection efforts. Austrians, moreover, are buying now! A special U.S. delegation will accompany the mission to Czechoslovakia where members of the mission will also be called upon to present papers. Call Fred E. Crosley, Jr. on 202-967-2232. Nov. 5-17.

AUSTRALIA. Electronic Components Measuring and Testing Equipment. Electronics is one of the prime markets in Australia, averaging 10 percent growth per year. The import market is currently $100 million annually. The recent announcement that color TV is to be introduced in 1975 offers U.S. manufacturers of broadcasting equipment and test and measuring equipment additional sales opportunities. Call John Klingelhut, 202-967-5751. Sydney Trade Center. Nov. 6-10.

SCANDINAVIA. Metal Parts Production Equipment. Metalworking is Sweden's largest industry. This manufacturing group has grown faster than any other in Sweden. Expanded U.S. exports are possible, because Sweden's metalworking industries are continuing efforts to achieve greater efficiency, supported by current investment in new metal parts production equipment estimated at $93 million. Related Swedish imports duties average only 5 percent ad valorem; the 7.5 percent revaluation of the krona vis-a-vis the dollar will further improve the competitiveness of such American goods. These factors should boost the U.S. share of this $60 million import market, to which American equipment manufacturers supplied goods worth $10 million in 1971. Call Robert Dormitzer, 202-967-3848. Stockholm Trade Center, Nov. 6-11.

SPAIN AND SWITZERLAND. Printing Equipment and Supplies Trade Mission. Products recommended for promotion include photoengraving and related equipment, fluorgraphic and photopolymer plates, photocomposition equipment, small office type offset printing presses, printing machines, rotary presses, and auxiliary tools, apparatus and supplies. Call Joseph Muller, 202-967-4227. Nov. 6-17.

BELGIUM AND NETHERLANDS. Production and Quality Control Instrumentation Trade Mission. Market factors make participation in the Mission favorable as economic growth increased total sales of this equipment to $200 million last year. Imports comprise 90 percent of the market and are projected to reach $275 million annually in four years. Call Charles E. Johnson, 202-967-2798. Nov. 6-18.

BRAZIL, COLOMBIA, VENEZUELA. Aviation Equipment Trade Mission. Products to be promoted are equipment requirements for upgrading international airport facilities, air-ground instrumentation and all types of general aviation equipment. Call Stanley Hays, 202-967-4927. Nov. 6-18.

IRAN, LEBANON, UNITED ARAB EMIRATES. Water Purification Trade Mission. Companies producing equipment for water purification, sewage disposal, and desalination are invited to join this group. Limited to ten firms. Deadline for applications, Sept. 1. Phone Larry C. Cozart, 202-967-2051. Nov. 10-23.

UNITED KINGDOM. Electro-Optics & Laser Equipment. Opportunities are increasing for U.S. suppliers. Equipment demands for R&D applications are growing, but even bigger gains, and the best opportunities for U.S. companies during the next several years, are appearing in industrial sectors. Market size estimates range as high as $10 million by the end of 1972, with growth estimated at 15-20 percent or more. Call your nearest U.S. Department of Commerce Field Office. London Trade Center, Nov. 13-17.

JAPAN. Industrial Assembly Equipment and Supplies. Japan's "recession" is bottoming out and business activity gradually picking up. The ceiling on loans for import financing was raised on April 1 from 26 percent to 50 percent, in effect making it easier for Japanese businessmen to import goods from abroad, including the U.S. These developments, plus a favorable market research report on industrial assembly equipment, are encouraging to U.S. exporters. Call Maurice Shea, 202-967-4511. Tokyo Trade Center, Nov. 13-18.

WEST GERMANY. Information and Document Storage and Retrieval Equipment. The market for this equipment in Germany is growing fast. From 24 percent in 1968 the growth rate rose to 42 percent in 1969, 50 percent in 1970, and an estimated 60 percent in 1971. Currently, domestic producers supply only 30 percent of German demand while the U.S. supplies 60 percent. Since 1965 it has been legal in Germany to use microfilm as a replacement for almost all original documents. This exhibition is being held in conjunction with the European Microfilm Congress. Call Lee W. Swift Jr., 202-967-4461. Mainz, Nov. 14-16.

ITALY. Pollution Control Equipment. The Italian Government, in its most recent Five-Year Plan (1971-75), has allocated $3.5 billion for pollution abatement. For 1972 Italy's water and air pollution control equipment market is valued at $300 million. Additionally, strict legal actions during 1971 along with a growing public outcry against mounting pollution has created a strong buying interest among Italian municipal and industrial decision makers. Research indicates that pollution control equipment has not been exhibited sufficiently in the country. Consequently, the U.S. Trade Center, located on the Milan International Fairgrounds, will host 30-35 U.S. firms in conjunction with Italy's largest antipollution exhibition, ANTINQUINIMENTO '72. Contact Don Johnson, 202-967-2795. Milan Trade Center, Nov. 15-19.

WEST GERMANY. Electronica '72. The U.S. Department of Commerce exhibit in the biggest electronics show in the world will feature production equipment for the electronics industry, measurement and test equipment, and electronic components. Indicators point to a 10 percent or better annual rate of increase in the European electronics market through the rest of the seventies. In West Germany, the largest of the European electronics markets, forecasts are upward for 1973. ELECTRONICA '72 gives U.S. electronics manufacturers an opportunity to exhibit for this market as it starts to expand again. Call Don Schmadel, 202-967-4601. Munich, Nov. 23-29.

IRAN, TURKEY. Textile Machinery Trade Mission. Companies producing textile machinery and related products are invited to join this group. Limited to ten firms. Deadline for applications, Sept. 1. Phone Larry C. Cozart, 202-967-2051. Nov. 26-Dec. 11.

PHILIPPINES, HONG KONG, KOREA. Metalworking and Plastics Production Trade Mission. Both the metalworking and plastics industries in these countries appear to have good prospects for the role of U.S. equipment. These industries in the countries to be visited are upgrading their capabilities and look to the United States as a principal source of new advanced equipment. Potential customers in the region are most interested in metal fabrication and a wide range of control, test and monitoring equipment. Call Charles E. Johnson, 202-967-4464. Nov. 27-Dec. 6.

BAHRAIN, KUWAIT, SAUDI ARABIA, UNITED ARAB EMIRATES. Building

Sales opportunities in 4 U.S. commercial exhibitions, trade fairs and solo exhibitions, 13 shows at the 10 U.S. Trade Centers, and 14 Trade Missions are being offered to present and potential U.S. exporters between now and the year's end.

Each Trade Center exhibition is limited to one particular line of products and centers are located in Bangkok, Buenos Aires, London, Milan, Mexico City, Frankfurt, Stockholm, Sydney, Tokyo, and Paris. For further information on the Trade Center shows described or for more facts on U.S. exhibitions, write: *Foreign Export Promotion, BIC-936, U.S. Department of Commerce, Washington, D.C. 20230.*

Trade missions are groups of U.S. businessmen organized to travel abroad promoting the export of U.S. goods and services made by their particular industry. **Write:** *Trade Missions, BIC-940, U.S. Department of Commerce, Washington, D.C. 20230.*

and Construction Equipment Trade Mission. Product categories limited to building construction equipment and supplies, highway and road construction equipment, construction tools. U.S. Foreign Service Posts in Middle East have strongly endorsed this mission which is designed to capture a share of the monies that will be expended on the construction and housing boom now taking place. Limited to 10 U.S. firms. Deadline for applications, Sept. 1. Phone H. Socks, 202-967-3904. Kuwait, Jidda, Riyadh, Dhahran, Manama, Abu Dhabai. Nov. 29-Dec. 20.

WEST GERMANY. Pumps, Valves and Compressors. Demand by German end-users of pumps, valves and compressors has been growing more rapidly than the ability of domestic producers to meet it. By 1975, due to an accelerated rate of investment, German buyers are expected to spend more than $1.15 billion annually, almost double the 1967 level, for such equipment. The United States, with a 23 percent market share, is the leading foreign supplier of pumps, valves and compressors to the German market. The growing order backlog, plus the effect of the currency revaluations, should give U.S. suppliers new and greater sales opportunities in this expanding market. Call your local U.S. Department of Commerce Field Office. Frankfurt Trade Center, Dec. 4-7.

SCANDINAVIA. Pollution Control Equipment. Growing environmental concern in the Scandinavian countries has prompted the enactment, or consideration, of comprehensive legislation to combat increasing air, water, and solid waste pollution problems. Sweden alone plans to invest nearly $1.2 billion for plants, systems, and equipment for industrial and municipal pollution control in the 1971-75 period. Although domestic suppliers account for a sizable share of the Nordic market, U.S. equipment and control techniques are highly regarded and price is only secondary when it comes to solving serious pollution problems. Potential customers are most interested in solid waste treatment and recycling equipment, water treatment apparatus, and test and monitoring instrumentation. Call H. L. Kirchschlager, 202-967-4543. Stockholm Trade Center, Dec. 4-9.

Space Fully Booked

The following exhibitions and trade missions in which all exhibit space has been reserved are still open for visits by interested industry representatives.

Food Processing Machinery and Equipment Exhibition, Mexico City Trade Center, Sept. 4-8; U.S. Packaging Machinery Exhibition, TOKYO PACK '72, Sept. 6-12; Air Conditioning and Refrigeration Equipment, Frankfurt Trade Center, Sept. 11-15; Brno International Fair, Czechoslovakia, Sept. 8-17; Medical Diagnostic and Monitoring Equipment, Paris Trade Center, Sept. 18-22; Plastics and Plastic Processing Equipment, PLAST '72, Milan Oct. 8-15; Bucharest International Fair, Romania, Oct. 15-24; Industrial, Business and Scientific Equipment Exhibition, Taipei, Oct. 16-21; Nuclear Equipment Exhibition, NUCLEX '72, Basel, Oct. 16-21.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20203."P" numbers should be used when responding to specific proposals.

WTD indicates that a World Trade Directory Report containing financial and background information on the foreign firm is available for $2 from the Department of Commerce, BIC-924, Washington, D.C. 20230, or from any Commerce Field Office.

1000 —INDONESIA— Mining companies will be interested in a recent report from the American Embassy in Djakarta covering the outlook for **minerals** in Indonesia. It deals with Indonesian Government policy on minerals, gives a commodity review, and discusses foreign trade and specific minerals. Free copies of the report are available from any Commerce Field Office or U.S. Department of Commerce, BIC-976, Washington, D.C. 20230. Ask for DIB 72-07-182.

2030, 2099—INDONESIA—Small firm producing **jams, pickles, sauces, peanut butter, honey, canned fruits and canned fish** seeks joint venture with American company to expand production to 300,000 cans or bottles per month. Estimated cost of project is $770,000, excluding working capital. Foreign partner to furnish equity (negotiable), production know-how, management and marketing assistance. Feasibility study available; market study to be prepared. Goan Hoey Oey, managing director, P. T. Pido Trading Co., Djalan Garuda 36, Djakarta. The Overseas Private Investment Corp. will extend investment insurance, and possibly financing, to eligible investors. P-72421.

2042 — NETHERLANDS — Established manufacturer of **cattle feed, vegetable and animal proteins, and steam dried fish meal** seeks collaborative arrangement with an American company in the same field. Established in 1834, company has a modern, well-equipped plant located close to large inland waterway systems. H. Lindemans, manager. N. V. Pluygers & Co., 108b Westzeedijk or POB 881, Rotterdam. WTD. P-72422.

2721—UNITED KINGDOM—Established publisher providing international forum for **negotiation of licenses and joint ventures through monthly bulletin** seeks U.S. companies interested in overseas licensing of technology and know-how. Gordon B. Coleman, International Licensing Ltd., 92 Cannon Lane, Pinner, Middlesex, England HA5 1HT. WTD. P-72419.

3079—GERMANY—Licenses to manufacture **plastic household products.** Firm produces brushes and other plastic articles, mainly for kitchens and bathrooms. Has sales organization covering Germany and the EEC. Vereinigte Buerstenfabriken GmbH, D-7868 Todtnau, Schwarzwaldstrasse 15, West Germany. WTD. P-72410.

2850, 2952 — NETHERLANDS — Seeks licenses to manufacture **heavy duty coatings.** Currently produces patented epoxy coal tar coatings for long-term and heavy duty protection of concrete and steel structures, especially underwater shore drilling rigs, sluices and jetties. Interested in licensing production in the U.S. Also produces bitumen and a wide range of related products. Established in 1932; employs 90; and annual sales of over $1 million. F. Kampman, vice president, HIM Chemie N.V., 5 Kenaupark, Haarlem. WTD. P-72411.

3079—SWEDEN—Licenses to manufacture and distribute **injection molded products.** Particularly interested in polystyrene and polypropylene packaging for food and medical use. Swedish Trade Commissioner, 20830 Rutland Dr., Southfield, Mich. 48075. P-72431.

3079, 3566 —SWITZERLAND— Licenses to manufacture **maintenance-free bush bearings** from either synthetic materials or sintered metals. Use on textile and construction machinery, machine tools. Particularly interested in small to medium-sized bearings, but not ball or needle bearings. Wants to market in Switzerland, through Europe, if possible. Firm presently produces bearings, plastic insulating materials. Operates modern plants and has sales and maintenance facilities in European industrial centers. Mr. Bernhard, director, Wanner AG, 8810 Horgen, Switzerland. WTD. P-72417.

3433 — ITALY — Boiler producer seeks licensing or joint venture arrangement to manufacture **gas operated steel boilers up to 50,000 cal/h (200,000 BTU/h).** Firm currently makes boilers from 10,000 to 30,000 cal/h for apartment houses and employs 135. Ing. A. Beretta, S.p.A., Via Risorgimento 13. 22053 Lecco (Como) Italy. Attn: Dr. Ing. Alberto Calegaris, Manager. WTD. P-72426.

3443—GERMANY—Major steel group, producer of steel building components, containers, pallets and materials storage equipment seeks licenses, technical know-how or a joint venture to manufacture **liquid natural gas containers of two types: a small container designed for automotive use and large sizes up to 100 cubic meters capacity.** Would also consider acting as exclusive distributor for a U.S. manufacturer. Interested firms should write Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. WTD. P-72430.

3494 — UNITED KINGDOM — Licenses sought by producer of reducing valves

and gas pressure regulators for liquified petroleum gas to manufacture **ancillary equipment in the gas or liquified petroleum gas industries.** Established in 1867, firm employs 150 and has annual sales of around $900,000. Peebles and Co. Ltd., Lyneburn Industrial Estate, Dunfermline, Fife, Scotland. Mr. H. R. Cunningham, director & gen. mgr. WTD. P-72425.

3500 —ITALY— Prominent management consulting company seeks licenses for major client in field of **plant automation equipment.** Particularly interested in producing machinery for automation of production lines. Includes retrieval, transport and storage of warehouse inventory; production line command and signal devices. Management concern employs 80 graduate engineers; specializes in technical assistance to industry. Ing. Luigi Viglino, Direttore Generale, Studio Organizzazione Industriale (S.O.I.), Corso Bolzano 4, 10121 Torino. WTD. P-72423.

3500—YUGOSLAVIA—Foreign trade organization representing two Yugoslav producers of heavy industrial machinery interested in contacting firms in field of **heavy industry** on behalf of the Yugoslav manufacturers Duro Dakovich of Slavonski Brod and Gosa of Smeder, Palanka. Some form of partnership is sought. IMO Import Export Transit Ges m.b.H., Graf Starhemberg Gasse 30/3/19, A-1040 Vienna, Austria. WTD. P-72424.

3519, 3522, 3561—MEXICO—Joint venture to develop further the product lines of three firms headed by same president. Principal products manufactured by the companies are **pumps and electric motors, 3.5 to 14 h.p. gasoline motors, and a variety of consumer products including mortorized garden tools, a small gasoline engine powered scooter, and kitchen utensils.** Capitalization of the three totals around $1.6 million and assets about $2.4 million. Up to fifty percent equity available to a U.S. partner. One firm has a chain of 50 major distributors throughout Mexico. Further details on the individual firms are available. Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. P-72420.

3531, 3589—FRANCE—Firms seeks licenses to manufacture **construction machinery, materials handling machinery and pollution control equipment.** Items of particular interest are ditch excavators, industrial sweepers, dumpers and loaders, small individual water treatment units, garbage compactors. Presently manufactures agricultural machinery and equipment. Employs 600; annual sales $10 million. S. Barbieux, Marketing Management, Rivierre Casalis, B.P. 339, rue Andre Dessaux, 45-Orleans. WTD. P-72427.

3535, 3576 —AUSTRALIA— Well-established firm seeks license to manufacture new products to complement **conveyor belt weighers and weigh feeders.** Holds several licensing or agency agreements with U.S. companies. K. J. Baillie Pty. Ltd., P.O. Box 128. Artarmon, New South Wales 2064. WTD. P-72418.

3559—JAPAN—License or joint venture to produce **sewage sludge disposal equipment.** Particularly interested in advanced technology for sludge dewatering and/or conditioning equipment. Firm presently makes valves, gates and water treating machinery and fire hydrants. Employes 400; reports annual sales of approximately $22 million. Hiroshi Tohji, chief, Export Div., Maezawa Valve Industrial Co., Ltd., 2 Kyobashi 3-chome, Chuo-ku, Tokyo. WTD. P-72416.

3559—SPAIN—Machinery manufacturer seeks to expand operations through licensing arrangements. Firm produces equipment for **chemical and cement plants, sugar refineries.** Particularly interested in developing its line of sugar processing machinery. Established 1902. Maquinaria y Metalurgia Aragonesa S.A., Utebo, Zaragoza. P-72436.

3559 — SWITZERLAND — Remaco AG, the licensing firm of the large ELCO concern. seeks manufacturing rights for **waste disposal equipment.** Interests include (1) garbage and refuse collection equipment such as compactors, (2) shredders, sorters and allied machinery for disposing of waste and (3) equipment used by waste recycling plants. ELCO employs about 2,000 in 22 different countries. It is a leading European manufacturer of heating and water treatment equipment. Interested U.S. companies are requested to provide product literature. Mr. Looser, president, Remaco AG, Steinenschanze 4, 4000 Basel. WTD. P-72412.

3559, 3585—SWITZERLAND—Manufacturing rights for **pollution control equipment such as filters, water treatment machinery; ventilation systems; central air conditioning equipment; and novel and prefabricated aluminum windows, doors and frames for the building industry.** Firm specializes in production of ventilating equipment, window frames and sanitary equipment. Recently moved into new plant. Also operates architectural office. Mr. Stutz, A. Kully AG, 4632 Trimbach. WTD P-72415.

3569 — JAPAN — Manufacturing rights for **packaging equipment** for blister, skin, fabricating packaging, over-wrapping and case forming and loading. Also seeks licenses to make **printing and industrial labor saving machinery, and advanced technology in precision castings and forgings.** Firm produces a wide range of equipment including bulldozers, cranes, molds, turbine blades, alloy castings and precision forged products. Is affiliate of Sumitomo Shipbuilding and Machinery Co.; has about 1,000 employeees. Nittoku Metal Industry Co., Ltd., Tokyo Office, 4-9 Nishi Shinjuku 1-chome, Shinjuku-ku, Tokyo. WTD. P-72428.

3599 — UNITED KINGDOM — Producer of filters for machine tool coolants and diesel engine lubricating oil seeks licenses to manufacture and market in Europe **automatic self-cleaning diesel lubricating oil filters.** Firm employs about 40 and has annual sales around $1.6 million. R. M. Wells, development manager of the firm, is speaking at a joint symposium of the American Institute of Chemical Engineering and the British Filtration Society (BFS) in Minneapolis, Aug. 27-30, and wants to meet prospective licensors. Philips Filtration Ltd., Darenth Works, Erith, Kent, England. WTD. P-72432.

3631 — ARGENTINA — Licenses sought to manufacture **household gas cooking ranges** by producer experienced in the industry and currently producing its own models. Industrias Cosquin S.A.C.I. & F., 20 de Setiembre 3354. Lanus, Provincia de Buenos Aires. WTD. P-72434.

3643, 3674—INDIA—Producer of agricultural tools and implements and distributor of wide range of products, including semiconductors and ACSR cables, proposes joint venture to establish plant with manufacturing capacity of **one million integrated circuits and one million connectors.** U.S. investor would provide 40 percent equity in the form of machinery and equipment, plus technical assistance. Bulk of proposed production would be for export. Proposed plant would be in State of Jammu and Kashmir, but any alternative site proposed by prospective U.S. partner would receive consideration. Firm's current annual sales are around $650,000. Kashmir Metal Mart (KMM), Hari Singh High St., Srinagar, Jammu and Kashmir State. WTD. P-72433.

3842—JAMAICA—Small-sized manufacturer and distributor of safety lamps and small commercial incinerators seeks technical assistance to produce **acid and alkali resistant protective gloves.** Licensing, consultative or joint venture arrangement will be considered. Initial production to be 50,000 pairs annually, increasing to 400,000 pairs in two years. Arnold Howell, principal, Jisaps Safety Services, 6 Whitehall Ave., Kingston 8. WTD. P-72414.

5912—ZAIRE—Belgian firm seeks to expand **drug store operation.** Has stores in Kinshasa and Lubumbashi. American participant offered majority interest. V. Renier, director, Societe Belge Socophar, 9 Rue de la Science, Brussels, Belgium 1040. WTD. P-72435.

7216 — KENYA — Well-established **dry cleaning** firm seeks joint venture with an American company to expand operations. Currently has four shops, a number of collection depots and a central dry cleaning and laundry plant. Z. K. Gakunju, managing director, Mbuni Dry Cleaners Ltd., P.O. Box 12873, Nairobi. WTD. P-72413.

Licensing In U.S.

For additional information on opportunities to manufacture foreign firm's products in the U.S., write Commerce's Office of International Investment, BIC-874, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248), referring to the appropriate file number.

UNITED KINGDOM—A leading English glass manufacturer is seeking licensees for the U.S. production of three items which it does not intend to manufacture itself. The products/processes involved are: **All-electronic temperature controller**—A solid state circuit generates a linear rate of heating/cooling in an electric or gas furnace. Facilities are incorporated to allow the heating/cooling rates to be made infinitely variable from 0.1 degrees C. to over 200 degrees C/minute; further the system can be programmed for cycling, incremental increases and holding temperature regimes. Fail safe features are included in the circuit. Reliability and stability have been proved over four years. Component and labor costs are low. **Pneumatic edge sensor**—A continuously hunting noncontact device used to locate the edge of a static or moving edge of material, or to indicate lateral movement. The apparatus is cheap, robust and can be used in adverse environments. **Pneumatic surface contour sensor**—The apparatus is

used to sense and measure surface position by a non-contact method. Roller eccentricities can be determined by the system, which is accurate to +0.001 inches. The apparatus is capable of working in high temperature or water laden atmospheres. File 2231

UNITED KINGDOM—The same glass manufacturer referred to above is also offering a **molten metal purification process** for removal of volatile and non-volatile impurities from molten tin. One of the methods can be used to prepare tin alloys on a continuous basis to fine levels of accuracy. File 2232

GERMANY—A well-established manufacturer of stamped metal parts for the automotive and other industries is offering licenses for U.S. production of a **patented catalytic exhaust decontamination device for motor vehicles.** File 2233

SWITZERLAND — A small company specializing in metal treatment and related operations offers a **new process for the application of black and white photographic films on aluminum.** The process is used in making signs, identification media, for entrance and exit signs, and for decorative purposes. Included in the process is a chemical surface treatment which makes the metal corrosion and scratch proof. File 2234

SWITZERLAND—A newly-formed company seeks licensees or joint venture partner for U.S. production of a new process for **extraction and fractionation of dry, soluble flavoring powders from fruits, vegetables and spices.** The process, which is an application of the fractional distillation process, allows inclusion of high volatility aromatic ingredients lost with present processes. The concentrates and powders are claimed to have the freshness and delicacy of the original product. No chemical additives are involved. File 2235

SWITZERLAND—A leading manufacturer of communication equipment is seeking a joint venture partner in the U.S. for the following products: **High frequency communication systems** for civil, military and police applications, including portable transceivers, mobil units (motorcycle, automobiles, etc.) and stationary stations; **Automatic information display systems** for airports, railway stations, banks and similar facilities, consisting of display boards and monitors, as well as all related equipment; **Automatic display modules; Personnel search systems; Alarm systems,** including automatic alarm transmission units, related information processing and display systems (e.g. flood alarm, etc.). The firm believes that the best U.S. prospects may be among manufacturers of digital equipment, terminals, electronic display systems or TV receivers. File 2236

SWITZERLAND—A medium-sized manufacturer of prefabricated construction elements offers for manufacture in the U.S. its newly-developed **plastic construction elements and panels** which are protected by patents in most industrialized countries, including the U.S. File 2237

SWITZERLAND—A firm specializing in commercialization of new developments in the air treatment equipment field is offering for U.S. production an **electrostatic precipitator and a gas permeable ribbon which functions as filtering material.** The filtering system has been tested at several leading hospitals and showed excellent results. File 2238

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the Business Opportunities Staff and other units of the Bureau of Domestic Commerce (BDC), U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers, used extensively by Government and industry.

U. S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Deparment of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency. A (★) at the end means that additional information may be borrowed by U.S. firms from the individual division of BDC. To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTD indicates that a World Trade Directory Report containing financial and business background information on the foreign firm is available for $2 from the U.S. Department of Commerce, BIC-976, Washington, D.C. 20230.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Field crop farms

01130 — SOUTH AFRICA — American long grained rice; A1 quality, clean, free of impurities, in 50 kilo bags. Requests c. & f. prices including 5% commission. Direct purchase & agency. Mill Agents South Africa (Pty.) Ltd. (importer, agent), 122/130 Boston House, Strand St., P.O. Box 3161, Cape Town, Cape Province. WTD 10/71.

Meat products

20115—BOLIVIA—Lard for soap industry. Correspondence requested in Spanish. Fábrica de Jabones y Velas "El Leon" (importer, dist., mfr.), P.O. Box 95, Tarija. WTD 4/72.

Food preparations

20932 — BOLIVIA — Coconut oil. Correspondence requested in Spanish. Fábrica de Jabones y Velas "El Leon" (importer, dist., mfr.), P.O. Box 95, Tarija. WTD 4/72.

Broad woven fabric mills, cotton

22110—CANADA—Cotton canvas duck, weight—10 oz., 12 oz., 15 oz. (approximate weight before treatment); width—48 in., or over preferred; grade—tarpaulin grade; treatment—waterproofed and dyed; color—brown; quantity—25,000 to 40,000 yds. per order. Inland Plastics Ltd. (mfr.), P.O. Box 2199, Alberta. WTD in prep.

22110—FRANCE—Stretch fabrics, cotton. BAMBINO (dist., mfr.), 100, cours du Docteur Long, 69006 Lyon. WTD in prep.

22114—GERMANY—Cotton yarn fabrics, woven, gray goods. Goertz & Co. (Importer, dist.), 86 Im Schlenk, 41 Duisburg. WTD in prep.

Yarn, thread mills, products

22811—GERMANY—Cotton yarns, carded. Goertz & Co. (importer, dist.), 86 Im Schlenk, 41 Duisburg. WTD in prep.

22812—GERMANY—Cotton yarns, super combed. Goertz & Co. (importer, dist.), 86 Im Schlenk, 41 Duisburg. WTD in prep.

Textile goods

22980—COLOMBIA—Fishing lines, net, cordage, seines, etc. Vikingos de Colombia S.A., Adolfo Tabares-Montoya, vicepres. (dist.), Albornoz Carretera Mamonal, Apartado Aereo 2858, Cartagena. WTD in prep.

22983—BOLIVIA—Cotton cordage for candles. Correspondence requested in Spanish. Fábrica de Jabones y Velas "El Leon" (importer, dist., mfr.), P.O. Box 95, Tarija. WTD 4/72.

Fabricated textile products

23929—GERMANY—Towels; cotton, velour one side—looped the other. Parfümerie-Import, Peters & Sickert KG. (importer, dist.), 75 Anna Str., 43 Essen. WTD in prep.

Household furniture

25117 — SOUTH AFRICA — Patio wood furniture. Sam Newman Ltd. (importer, dist., retailer), 30 Burg St., P.O. Box 1573, Cape Town, Cape Province. WTD 6/72.

25143 — SOUTH AFRICA — Patio metal furniture. Sam Newman Ltd. (importer, dist., retailer), 30 Burg St., P.O. Box 1573, Cape Town, Cope Province. WTD 6/72.

Partitions, shelving, lockers, office, store fixtures

25420 — JAMAICA — Display fixtures: gondolas, cases for small department store. Brochures, price list requested. Karam's Department Store (retailer), 6 Manchester Rd., Mandeville, Manchester. WTD in prep.

Converted paper, paperboard

26410—SOUTH AFRICA—Paper, paper products: gumming kraft, sulphite tissue, self adhesive paper, heat fix papers. Direct purchase & agency. WTC Coastal (Pty.) Ltd. (mfr., agent), P.O. Box 152, Epping Industria, Cape Province. WTD 12/71.

26412—ZAMBIA—Biscuit inner wrap paper, waxed and wax-laminated. Sunrise Biscuit Co., Ltd. (mfr.), P.O. Box 506, Ndola. WTD in prep.

26471 — SAUDI ARABIA — Tampons, sanitary paper products, including diapers, facial tissues. Abdulaziz Al-Mansoor (dist., retailer, agent), P.O. Box 515, Dammam. WTD 7/72.

26495—GUATEMALA—Thin cardboard used as backing for photographs. Correspondence requested in Spanish. Casa Avelar—Salvador Avelar G. (importer), 18 Calle 3-59, Zona 1, Guatemala City. WTD 7/72.

26495—JAPAN—Electronic data processing punch card waste, without regard to size, thickness. Sanyu Bussan Kaisha, Ltd., Attn: Koichi Wako, Pres. (importer, dist.), Nikko-Mita Bldg., 4-26 Takanawa 1-chome, Minato-ku, Tokyo 108. WTD 10/71.

Industrial chemicals

28123—BOLIVIA—Caustic soda. Correspondence requested in Spanish. Fábrica de Jabones y Velas "El Leon" (importer, dist., mfr.), P.O. Box 95, Tarija. WTD 4/72.

Synthetic materials

28211—GERMANY—Plastic sheets for production of advertising signs by deep-drawing process, 70 x 70 cm. = 27.5" x 27.5". Magnetic plastic strips, 12, 15, 19 and 24 mm. broad and 1, 1.5 and 2 mm. thick. Neuwaelder K.G. (importer, dist., mfr.), 12 Friedrichstr., 3500 Kassel. WTD 7/72.

28213—NEW ZEALAND—Polyvinyl patterned sheet; thicknesses .005" to .016", for manufacture into children's raincoats, shower-bath curtains, like products. Products offered should be on exclusivity basis. Sample swatches, f.o.b. prices requested. Swinson Agencies Ltd., Attn: Grant E. Swinson, co. mgr. (importer, dist., mfr.), P.O. Box 125, Auckland, 1. WTD 7/72.

Drugs

28331—FRANCE—Galenic products for manufacture of pharmaceutical preparations. Laboratoires Galéniques Vernin Sarl (importer, mfr.), 1 rue Dajot, 77-Melun. WTD in prep.

28332 — FRANCE — Medicinal plants, vegetable and fruit extracts for manufacture of pharmaceutical, dietetic, cosmetic products. Laboratoires Galéniques Vernin Sarl (importer, mfr.), 1 rue Dajot, 77-Melun. WTD in prep.

28340—SAUDI ARABIA—Pharmaceutical, drug preparations for human use, finished products. Abdulaziz Al-Mansoor (dist., agent, retailer), P.O. Box 515, Dammam. WTD 7/72.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28445 — SAUDI ARABIA — Cosmetics, toilet preparations. Abdulaziz Al-Mansoor (dist., agent, retailer), P.O. Box 515, Dammam. WTD 7/72.

Paints, varnishes, lacquers, enamels

28511 — SWITZERLAND — Undercoating paints, primers to be filled into aerosols, or already filled into aerosols for sales in do-it-yourself centers; novel paints for aerosols or in aerosols for metal, wood, furniture, etc. Direct purchase & agency. Agol Chemie AG, Attn: W. von Siebanthal (importer, dist.), 3172 Niederwangen. WTD 2/72.

28511—THAILAND—Coal tar epoxy, primer. Requests c.i.f. Bangkok prices, catalogs, brochures, samples. Sathask-Driam (Thailand) Co., Ltd. (importer, mfr.), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

Gum, wood chemicals

28611 — BOLIVIA — Wood resin. Correspondence requested in Spanish. Fábrica de Jabones y Velas "El Leon" (importer, dist., mfr.), P.O. Box 95, Tarija. WTD 4/72.

Chemical products

28993—LIBYA—Drilling muds. Chemicals & Trade United (importer, dist., agent), P.O. Box 3783, Tripoli. WTD 10/71.

Petroleum refining

29110 — BOLIVIA — Waxes from petroleum. Correspondence requested in Spanish. Fábrica de Jabones y Velas "El Leon" (importer, dist., mfr.), P.O. Box 95, Tarija. WTD 4/72.

Products of petroleum, coal

29926 — SWITZERLAND — Rust removing, preventative preparations in spray form (for do-it-yourself use). Direct purchase & agency. AGOL Chemie AG, Attn: W. von Siebanthal (importer, dist.), 3172 Niederwangen. WTD 2/72.

Plastic products

30795—FINLAND—High quality plastic packages for IC and hybrid circuits. Hilvonen Technical Products Oy, Attn: Lasse Suuronen (importer, dist.), P.O. Box 201, 00250 Helsinki 25. WTD 7/72.

30796—NEW ZEALAND—Self adhesive vinyl wall covering in designs simulating ceramic tile. Product on exclusivity basis. Samples, f.o.b. prices requested. Swinson Agencies Ltd., Attn: Grant E. Swinson, co. mgr. (importer, dist.), P.O. Box 125, Auckland 1. WTD 7/72.

Structural clay products

32530—BOLIVIA—Tile: ceramic wall, floor. Correspondence requested in Spanish. E.M.C.I.C. Ltda. Constructora Industrial y Comercial (importer, construction firm), Av. 16 de Julio "Alameda" Bldg., P.O. Box 1550, La Paz. WTD 4/72.

Abrasive, asbestos, nonmetallic mineral products

32933—THAILAND—Pipe insulation, asbestos type. Requests c.i.f. Bangkok prices, catalogs, brochures, samples. Sathask-Driam (Thailand) Co., Ltd. (importer, mfr.), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

32961 — ICELAND — Glass wool insulation for construction. Seifur h/f (importer, dist.), Kirkjuhvoll, Reykjavik, P.O. Box 5030. WTD 7/72.

32961—ICELAND—Glass fiber wool insulation with aluminum foil backing; pipe insulation. Samband of Iceland, Building Products Dept., Attn: Omar Kristjansson (importer, dist., agent), P.O. Box 180, Reykjavik. WTD 12/71.

Steel mill products

• 33100—IRAN—100 tons iron strapping 2 x 25 MM mild steel in coils. Bid deadline September 16. Tender No. 739/51 Iranian State Railways. Copies of tender documents available from Iranian Economic Mission, 2233 Wisconsin Ave., NW., Washington, D.C. 20007.

33120—PHILIPPINES—Magnetic plates to be used in manufacture of clutches used in car airconditioners. Parkomat Philippines, Inc., Attn: Miss Lourdes C. Jose, purchasing mgr. (dist., mfr.), 2178 Pasong Tamo, Makati, Rizal. WTD in prep.

33120—TAIWAN—Stainless steel round bars. Chun Yuan Steel Industry Co., Ltd. (mfr.), 101, Alley 14, Hululi, Shihlin, Taipei 111. WTD 3/72.

33122—SINGAPORE — Steel ingots: type: 60 kgs; size: 70 x 95 mm; length: 1.2 to 1.4 m; chemical composition: CO.-25% max; PO.06% max; SO.06% max; quantity required: 250 tons per m; destination: Port Belawan; letter of credit: will be established by firm in Singapore. Mr. NG Chit Cheong, Man. Dir., Chu Cheong Co., Pte. Ltd. (importer, dist., agent), 211-A Victoria St., Singapore 7. WTD 6/72.

33123—TAIWAN — Hot-rolled steel sheets/plates (2nd quality or rejected). Chun Yuan Steel Industry Co., Ltd. (mfr.), 101, Alley 14, Hululi, Shihlin, Taipei 111. WTD 3/72.

33124—THAILAND — Hot rolled steel sheets and strips, in coil, various thickness. Requests c.i.f. Bangkok prices, literature. Sathask-Driam (Thailand) Co., Ltd. (importer, mfr.), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

33125—TAIWAN—Stainless steel wires. Chun Yuan Steel Industry Co., Ltd. (mfr.), 101 Alley 14, Hululi, Shihlin, Taipei 111. WTD 3/72.

33127 — TAIWAN — Cold-rolled steel sheets/plates (rejected or waste). Chun Yuan Steel Industry Co., Ltd. (mfr.), 101 Alley 14, Hululi, Shihlin, Taipei 111. WTD 3/72.

Iron, steel foundries

33210—PHILIPPINES—Calendar roll (3 rolls), roll size approximately 10" diameter x 36" face width or alternatively 12" diameter x 42" face width, complete—1 unit. Gulf Rubber Products, Attn: Lorenzo A. Salvador, gen. mgr. (importer, dist., mfr.), 131 Mexico Ave., Las Piñas, Rizal. WTD in prep.

Primary smelting, refining of nonferrous metals

33321—THAILAND—Lead bullion. Requests c.i.f. Bangkok prices, literature. Sathask-Driam (Thailand) Co., Ltd. (importer, mfr.), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

33334—THAILAND—Zinc slab. Requests c.i.f. Bangkok prices, literature. Sathask-Driam (Thailand) Co., Ltd. (importer, mfr.), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

Rolling, drawing, extruding of nonferrous metals

• 33500—UGANDA — Advance notification of the East African Posts and Telecommunications intention to call for tenders for the supply of: wire copper covered steel and wire copper hard drawn is issued so that attention may be drawn to U.S. suppliers for this type of equipment. Inquiries regarding the tender or requests for tender documents from the U.S. should be addressed to: The Crown Agents for Overseas Governments and Administrations, 4, Millbank, London, S.W. 1P. 3JD, England. Their reference number for this tender should be quoted on all inquiries and is: "E2U/EAPT WB TWO 2/15240." The bid deadline period, once the tender documents have been issued, will be very short. Tender No. 4/72.

33521—BOLIVIA—Aluminum cable ⅜" EC grade—H-12 temper, in rolls of 1,000 kg. Quotations c.i.f. Arica, Chile. South American Corp. (importer, dist.), Casilla (P.O. Box) 394, Cochbamba. WTD in prep.

33571—BOLIVIA—Wire, aluminum copperclad, different sizes, in rolls of 1,000 kg. Quotations c.i.f. Arica, Chile. South American Corp. (importer, dist.), Casilla (P.O. Box) 394, Cochabamba. WTD in prep.

Metal cans

34110 — COLOMBIA — Metal packaging for fish, seafood. Vikingos de Colombia, S.A., Mr. Adolfo Tabares-Montoya, vicepres. (dist.), Albornoz Carretera Mamonal, Apartado Aereo 2858, Cartagena. WTD in prep.

Cutlery, hand tools, general hardware

34232 — FRANCE — "Do-it-yourself" small equipment and tools for improving housing, such as wall scrapers, small concrete mixers. Schreyeck S.A. (mfr.), Zone Industrielle, 67-Molsheim. WTD in prep.

34292 — SOUTH AFRICA — Furniture hardware. Sam Newman Ltd. (importer, dist., retailer), 30 Burg St., P.O. Box 1573, Cape Town, Cape Province. WTD 6/72.

34294—BOLIVIA—Hinges, builders hardware. Correspondence requested in Spanish. E.M.C.I.C. Ltda., Constructora Industrial Comercial (importer, construction firm), Av. 16 de Julio, "Alameda" Bldg., P.O. Box 1550, La Paz. WTD 4/72.

34294 — SOUTH AFRICA — Builders' hardware. Sam Newman Ltd. (importer, dist., retailer), 30 Burg St., P.O. Box 1573, Cape Town, Cape Province. WTD 6/72.

34295 — SOUTH AFRICA — Household hardware. Sam Newman Ltd. (importer, dist., retailer), 30 Burg St., P.O. Box 1573, Cape Town, Cape Province. WTD 6/72.

Heating apparatus, plumbing fixtures

34320—FRANCE—Sprinklers (all types) for green spaces (gardens, lawns). Schreyeck, S.A. (mfr.), Zone Industrielle, 67-Molsheim. WTD in prep.

Fabricated structural metal products

34460 — JAPAN — Fire escapes. Uyeda Escape Chute Construction Co., Ltd. (importer, mfr., agent), 7-28 Katamachi 2-chome, Miyakojima-ku, Osaka. WTD in prep.

34492—GERMANY — Prefabricated and portable metal buildings and parts, farming and commercial type. Holzerland, Günther, Normbau (importer), 81, Kölner Strasse, 5351 Kommern. WTD 6/72.

Fabricated metal products

34946 — COLOMBIA — Hydraulic nozzles for hydraulicking; Hoskin's New Hydraulic Giant, or equal. Inlet of nozzle to correspond with 8" diameter pipe. Central Hidroelectrica de Caldas S.A. (Ing. Benjamin Duque-Hoyos, Commercial Div.), (importer, hydroelectric plant), Edificio Seguros Bolivar, Oficina 505, Apartado Aereo 83, Manizales (Caldas). WTD in prep.

34990 — PHILIPPINES — Permanent magnets to be used in manufacture of motors used in car airconditioners. Parkomat Philippines, Inc., Attn: Miss Lourdes C. Jose, purchasing mgr. (dist., mfr.), 2178 Pasong Tamo, Makati, Rizal. WTD in prep.

Engines, turbines

35193 — COLOMBIA — Marine engines, diesel/semi-diesel. Vikingos de Colombia S.A., Adolfo Tabares-Montoya, vice-pres. (dist.), Albornoz Carretera Mamonal, Apartado Aereo 2858, Cartagena. WTD in prep.

Farm machinery

• 35200—MOZAMBIQUE—12 combines, 9 rotary weeders, 5 field forage harvesters, pickers, hay balers, harvesters, 107 plows, 93 harrows, 108 wheel tractors, and other farm implements. Tender No. CON. ESP. No. 1-ST/1972. Bid deadline September 18. Contact Mozambique Cereals Institute Avinida da Republica 882-6° Lourenco Marques (1), Mozambique.

Construction, mining, materials handling machinery, equipment

• 35300—GREECE — Design, construction and assembly of bucket wheel excavator and conveyor belt system. Ptole Mais Lignite Mining & Industrial, Ltd., 27 Kanningos St., Athens.

• 35300—GREECE—Three electric dockside cranes one each of 15/30, 6, and 3/6 tons. Project #1176/676/6-17-72. Bid deadline August 21. Volos Harbor Fund of the Harbor Committee. Specifications available on a short term loan basis to firms domiciled in the U.S. from General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C., 20230. ★(202-967-4317).

• 35300—INDIA — Front end loader, pneumatic wheeled, 140-150 H.P.; 2½ to 3 cu. yd. buckets, and spare parts. Specifications available on loan basis from General Industries Division, BDC-772, U.S. Dept of Commerce, Wash., D.C., 20230. Bid deadline August 30. Contact: Mr. K. B. Vig; Chief Purchasing Officer, Beas Purchase Organization, Talwara Township, Dist. Hoshiarpur, Punjab.

• 35300—INDONESIA — Requests bids on dredges, equipment, accessories and spare parts. Specifications available on short term loan basis to firms domiciled in the U.S. from General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C., 20230 ★(202-967-4317). Bid deadline September 28. Includes dredges, pipe, piles, bulldozers, wheeled loaders and graders. Tender No. IDA-1/IRP-4th/72.

35310 — PHILIPPINES — Split rim tire and wheel assemblies for larger sizes of heavy equipment such as log skidders, log loaders. San Pablo Oil Factory, Inc., Attn: James McKeen, pres. (dist., agent), Suite E., 4th Floor, Davies Far East Bldg., P.O. Box 1123, Buendia Ave., Makati, Rizal. WTD 10/71.

35313—PHILIPPINES—Tractor and related construction machinery parts, "Caterpillar" or equal, and "Worthington" or equal, brands from firms located on West Coast. Igri Industrial Sales Corp., Attn. Mr. Eli R. Bicaldo (importer, dist., retailer), 484 Gregorio Araneta Blvd., Quezon City. WTD 4/72.

35316—BOLIVIA—Mixers, concrete. Correspondence requested in Spanish. E.M.C.I.C. Ltda. Constructora Industrial Comercial (importer, construction), Av. 16 de Julio "Alameda" Bldg., Casilla (P.O. Box) 1550, La Paz. WTD 4/72.

35317—JAPAN — Light-duty wheel-type tractor shovel loaders; 20 H.P. engine with bucket capacity of ½ cubic meters. Golf Links Equipment Co., Ltd. (importer, dist., agent), 270 Sawaragi-nishi, Ibaragi City, Osaka Prefecture. WTD in prep.

35322—JAMAICA—One complete limestone crushing mill, including screens, capable of processing 150-250 tons per hr. Direct purchase & agency. H. H. Tate Ltd. (importer, agent, bulk hauling and earth moving contractor), 203 Windward Rd., Kingston 2. WTD in prep.

Metalworking machinery

35413—FRANCE—Cutting and finishing machines with numerical control for aerospace industry. Halbronn Frères S.A. (importer, agent), 17 rue François de Neufchateau, 88-Epinal. WTD in prep.

35416—FRANCE—Large size machine-tools for aerospace industry: milling machines. Halbronn Frères S.A. (importer, agent), 17 rue François de Neufchateau, 88-Epinal. WTD in prep.

35420 — PHILIPPINES — Multi-platen hydraulic presses, electrically or steam heated, complete with controls, with platen sizes ranging from 10" x 10" to 24" x 24"; 6 units. Gulf Rubber Products, Attn: Lorenzo A. Salvador, gen. mgr. (importer, dist., mfr.), 131 Mexico Ave., Las Piñas, Rizal. WTD in prep.

35453—FRANCE—Large size machine-tools for aerospace industry: tracers. Halbronn Frères S.A. (importer, agent), 17 rue François de Neufchateau, 88-Epinal. WTD in prep.

Special industry machinery

• 35500—KOREA—Invitation to bid on Seamless Hosiery machines, Cone Winder and Sock finishing machine for the Dong Lim Hosiery Co., Seoul, Korea has been issued by the Foreign Loan Dept., the Korean Development Bank, C.P.O. Box 28, Seoul, Korea. Tender No. KDB-KFW-16. Bid deadline August 17. Copies of specifications are available on a loan

basis from the General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C., 20230 ★(202-967-5589).

• 35500—KOREA—Invitation to bid on Seamless Hosiery machinery and Cone Winders for Cho Rim Hosiery Co., Seoul, Korea has been issued by the Foreign Loan Dept., the Korea Development Bank, C.P.O., Box 28 Seoul, Korea. Tender No. KDD-KFW-15. Bid deadline August 17. Copies of specifications are available on a loan basis from the General Industries Div., BDC-772, U.S. Dept. of Commerce, Washington, D.C., 20230 ★(202-967-5589).

• 35510—PERU—Grinders or hammermills and feed mixers to set up feed production units of from 3 to 10 tons daily capacity. FAO-IVITA (Food and Agricultural Organization of the United Nations) Universidad Nacional Mayor de San Marcos. Apartado 4480, Lima. Attn: Dr. Paul Aldunate.

35512 — ZAMBIA — Bakery machinery (complete line assembly) for baking of cookies (biscuits) including wrapping machine. Quote landed cost of plant; requests catalogs. Sunrise Biscuit Co., Ltd. (mfr.), P.O. Box 506, Ndola. WTD in prep.

35513—COLOMBIA—Fish and seafood canning, packing machinery. Vikingos de Colombia S.A., Adolfo Tabares-Montoya, vice-pres. (dist.), Albornoz Carretera Mamonal, Apartado Aereo 2858, Cartagena. WTD in prep.

35513—PARAGUAY—Processing equipment to produce meat-simulating products, with characteristics similar to hamburgers, sausages, etc. from soy beans. Alfredo R. Friedmann, Azucarera Friedmann S.A. (importer, mfr.), Villarrica. WTD in prep.

35513—PARAGUAY—Hog meat and by-products packing and processing plant; 300 hogs per day; to produce hog meat pieces, grease, ham, salt pork, sausage, salami, liverwurst and blood sausage; to include refrigeration equipment for refrigerated, frozen products; 200 volts, 50 cycles. Dr. Aurelio C. Amarilla, STP, ONP (Govt. agency), Calle Iturbe 175, Asuncion.

35513 — PERU — Hog slaughter plant, complete with refrigeration chamber and facilities for processing and curing hams, bacon, sausages. Plant should be capable of handling about 1.5 million kilos annually—half processed and half as fresh pork. FAO-IVITA (Food and Agricultural Organization of the United Nations), Universidad Nacional Mayor de San Marcos, Apartado 4480, Lima. Attn: Dr. Paul Aldunate. WTD in prep.

35513—URUGUAY—Bottle washing, filling, crown top capping, and labeling plant, 3,600 bottle per hr. capacity, for edible oils, 220 v., 50 c. power available. Aceitera del Uruguay and Cidac Unidas S.A. (mfr.), Angel Salvo 89, Casilla de Correo 691, Montevideo. WTD in prep.

35521—SINGAPORE—Industrial sewing and knitting machines, equipment for garment, knitting factories. Mr. NG Chit Cheong, Man. Dir., Chu Cheong Co., Pte. Ltd. (importer, dist., agent), 211-A Victoria St., Singapore 7. WTD 6/72.

35591—COLOMBIA—Essential oils distillery machinery, particularly citronella oil distillery. Mr. Daniel A. Guzman, I.A. (importer, dist., agent), Calle 14 No. 8-37 Piso 5, Apartado Aereo 5520, Bogota. WTD 1/72

35591—SINGAPORE — Chemical manufacturing machinery and equipment, parts, specifications of hydrated lime given below: calcium hydroxide ($Ca(OH)_2$) not less than 96%; lime (CaO)-nil; calcium carbonate ($CaCO_3$) not more than 2%; grading test—not less than 92% passing 200 B.S.S. sieve; arsonic—not more than 10 p.p.m.; lead—not more than 5 p.p.m. Hydrated lime to be packed in waterproof paper and then in multi-wall paper bags. Uniform weight of chemical in each bag should be approximately 1 cwt. Mr. G. C. K. Choudhury, Man. Dir., Ben & Co., Ltd. (importer, dist., agent), 32 Kuching Rd., Singapore 4, or G.P.O. Box 851, Singapore 1. WTD 4/72.

35595 — BOLIVIA — Brick, tile, ceramic machinery. Correspondence requested in Spanish. E.M.C.I.C. Ltda., Constructora Industrial Comercial (importer, construction), Av. 16 de Julio "Alameda" Bldg., P.O. Box 1550, La Paz. WTD 4/72.

35595—JAMAICA—Leather working machinery (50 cycle) for small scale manufacture of leather articles (e.g. belts, handbags, wristbands). Brochures, prices c.i.f. Kingston requested. Carol Ferreira's Realty Ltd., Attn: Mr. Carol Ferreira (real estate brokers, consultants), 69 Lady Musgrave Rd., P.O. Box 140, Kingston 8. WTD in prep.

35595—TAIWAN—Cotton swabs making machines for making cotton swabs for hospital use. The Tunnel Co., Ltd. (importer, agent, exporter), P.O. Box 22761, Taipei. WTD in prep.

General industrial machinery

• 35600—EL SALVADOR—Three deep well pumping units and two cistern type vertical pumping units. "Licitacion IM5/72; bid deadline Aug. 21, 1972. Administracion Nacional de Acueductos y Alcantarillados (ANDA), Seccion de Proveduria del Departamento de Servicios, Local 209, Edificio Comercial Pacifico, 9A Avenida Sur 214, San Salvador. Interested bidders must obtain plans and specifications from the above Agency at a cost of $8.00 per set.

35610 — ITALY — Irrigation machinery and equipment; rain irrigation plant; control boards for irrigation plant; radio operated valves for irrigation. SO.IM Sondaggi Impianti di Pace Giorgio (dist., mfr., servicing), Viale XX Settembre 70, 95129 Catania. WTD 7/72.

35614 — CANADA — Air compressor pumps from 1 hp. to 50 hp. Barber Equipment, Attn: Howard Barber (mfr.), 136 Bunting Rd., St. Catharines, Ontario. WTD in prep.

35616—ITALY—Parts, attachments for hydraulic fluid power pumps and for air and gas compressors. Technon s.r.l. (dist., retailer, consulting engineers), Via della Botanica 92, 00172 Rome. WTD 6/72.

35642 — ISRAEL — Air filtration equipment against industrial pollution/poisonous gases for use in factories, air-raid shelters. M.R.B. Engineering Supervision Ltd. (importer, engineering consultants), 5 Sea Rd., P.O. Box 44550, Haifa. WTD in prep.

35690 — NETHERLANDS — Automatic fire sprinkler equipment. Direct purchase and/or agency. Installatiebureau van der Plas B.V., Attn: J. H. van der Plas, mgr. (importer, dist., installer/maintenance), 1 Ridderspoorstraat, or P.O. Box 1157, Hertogenbosch. WTD 6/72.

Office, computing, accounting machines

• 35700 — EL SALVADOR — Supply of two postage meters and certifying machines. Bid deadline July 31. Tender documents available from Concurso No. 123(72), Comprado II, Proveduria General de la Republica, 20, Piso, Avenida Espana 613, San Salvador, El Salvador, C.A.

• 35700—GREECE—Supply of electric check writers operating on AC, 220V, 50 cycles; postage stamps vending machines; electric postage stamp cancelling machines; manually operated postage stamp cancelling machines. Tender Nos. 1615/44200, 1615/44600, 1615/44800, respectively, bid deadline August 30. Terms and specifications from Hellenic Telecommunications Organization, Call for Bids Division, 6 Klissovis St., Athens, Greece. A copy is available for review only, not for loan, in the Business, Photographic and Scientific Equipment Division, Room 1128, U.S. Dept. of Commerce, Washington, D.C.

35720 — BOLIVIA — Typewriters, parts; electric, manual. Quotations c.i.f. Arica, Chile. South American Corp. (importer, dist.), Casilla (P.O. Box) 394, Cochabamba. WTD in prep.

35731 — GERMANY — Small computers for office use. Direct purchase & agency. B O G Buero Organisations Ges.mbH. (importer, dist., agent), 144 Heddernheimer Landstr., 6 Frankfurt/Main. WTD 7/72.

35733 — GERMANY — Terminals, other peripheral computing equipment. Direct purchase & agency. B O G Buero Organisations Ges.mbH. (importer, dist., agent), 144 Heddernheimer Landstr., 6 Frankfurt/Main. WTD 7/72.

35733 — GERMANY — Systems for data acquisition with projection screens and magnetic tape cartridges. Direct purchase & agency. Hypertech Computer GmbH. (importer), 275 Münsterstrasse, 4 Düsseldorf. WTD in prep.

35741 — SWITZERLAND — Low price, battery operated, pocket-sized minicalculators. Exclusive sales rights requested. Mark Mueller, Studio-Akustik und Elektronik (importer, dist.), Sandacker 14, 8052 Zurich. WTD in prep.

Service industry machines

35851 — SWITZERLAND — Household and commercial ice-making machines (possibly 220 v.). Direct purchase & agency. AGOL Chemie AG, Attn: W. von Siebenthal (importer, agent), 3172 Niederwangen. WTD 2/72.

35853 — COLOMBIA — Refrigeration equipment for fish industry. Vikingos de Colombia S.A., Adolfo Tabares-Montoya, vice-pres. (dist.), Albornoz Carretera Mamonal. Apartado Aereo 2858, Cartagena. WTD in prep.

Electrical industrial apparatus

36232 — THAILAND — Welding electrodes. Requests c.i.f. Bangkok prices, catalogs, brochures. Sathask-Driam (Thailand) Co., Ltd. (importer, manufacturer), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

Household appliances

36312 — SOUTH AFRICA — Barbecuers, grills, braziers for outdoor cooking. Sam Newman Ltd. (importer, dist., retailer), 30 Burg St., P.O. Box 1573, Cape Town, Cape Province. WTD 6/72.

• 36321—TUNISIA—20,000 electric refrigerators 6.4 to 13.4 cu. ft., 50 cycles, half 110v., half 220v. Bid deadline Sept. 13, 1972. Syndicat National du Froid, 7 Rue Annaba, Tunis. Specifications (in French) available to firms domiciled in U.S. from Consumer Products Division, BDC, U.S. Department of Commerce, Washington, D.C. 20230, ★(202-967-2923).

36321 — SWITZERLAND — Attractive metal ice-boxes for household, commercial use (incl. hotels, restaurants). Direct purchase & agency. AGOL Chemie AG, Attn: Mr. W. von Siebenthal (importer, agent), 3172 Niederwangen. WTD 2/72.

36343 —SWITZERLAND— Small household appliances such as mixers, juicers, similar items (possibly 220 volt); household ice-crushing machines. Direct purchase & agency. AGOL Chemie AG, Attn: Mr. W. von Siebenthal (importer, agent), 3172 Niederwangen. WTD 2/72.

36350 — SWITZERLAND — Novel portable vacuum cleaners for household use (possibly 220 volt). Direct purchase & agency). AGOL Chemie AG, Attn: W. von Siebenthal (importer, agent), 3172 Niederwangen. WTD 2/72.

Electric lighting, wiring equipment

36421—JAMAICA—Fixtures for electric table and standing lamps. Brochures, prices c.i.f. Kingston requested. William Aiken, Aiken's Clay Works (dist., mfr.), 16 Tarrant Dr., Kingston 10. WTD in prep.

36426 — BOLIVIA — Lighting fixtures, parts, accessories. South American Corp. (importer, dist.), Casilla (P.O. Box) 394, Cochabamba. WTD in prep.

Radio, television receiving sets

36510 — GERMANY — Radio receivers, tape recorders, tuners, amplifiers, loudspeakers. Direct purchase & agency. Ing. Karl A. Marzik (dist., agent), 6236 Eschborn/Ts., Frankfurter Allee 19-21. WTD 7/72.

36515—SWITZERLAND — Hybrid (2nd generation) AC amplifiers, preamplifiers, A.M.-F.M. tuners, for hi-fi stereo equipment for home entertainment. Exclusive sales rights requested. Mark Mueller, Studio-Akustik und Elektronik (importer, dist.), Sandacker 14, 8052 Zurich. WTD in prep.

Communications equipment

• 36600 — GREECE — The Civil Aviation Administration requires one secondary radar unit for the Athens airport. Tender No. 1/72, bid deadline October 11. Specifications and terms are available on a short-term loan basis to firms located in the U.S. from the Communications - Electronics Division, BDC - 720, Room 1112, U.S. Dept. of Commerce, Washington, D.C. 20230 ★(202-967-4822). For additional copies you may write to Civil Aviation Administration Procurement Section, 1 King George Ave., 6th Bus Stop, Hellinikon, Athens.

36620 — GERMANY — Spare parts for radar, telecommunications equipment. Elekluft Elektronik-und Luftfahrtgeraete GmbH (servicing), D-5300 Bonn. Justus-von-Liebig-Strasse 18. WTD 6/72.

36623—JAMAICA—Mechanical and electrical (50 cycle) safety and security devices for use in residential, industrial security, including locks, bolts, chain alarms. Brochures, prices c.i.f. Kingston requested. Brink's Jamaica Ltd., Attn: Orville F. Bernard, gen. mgr. (armored security transport service), 5 South Camp Rd., P.O. Box 88, Kingston 16. WTD in prep.

36623 — NETHERLANDS — Automatic fire alarm systems. Direct purchase and/or agency. Installatiebureau van der Plas B.V., Attn: J. H. van der Plas, Mgr. (importer, dist., installer/maintenance), 1 Ridderspoorstraat, or P.O. Box 1157, 's-Hertogenbosch. WTD 6/72.

Electronic components, accessories

36740 — SWITZERLAND — Solid state photoelectric cells, other solid state opto electronic devices. Metronic AG, (importer, dist., mfg.), Duebendorfstrasse 333, 8051 Zurich. WTD 6/72.

36790—JAPAN — Electronic materials, components, e.g., liquid crystals, precision resistors, semiconductor devices. Direct purchase & agency, TDK Electronics Co., Ltd. (mfr.), 14-6 Uchikanda 2-chome, Chiyoda-ku, Tokyo. WTD in prep.

36792—SWITZERLAND—Tantalum capacitors. Metronic AG, (importer, dist., mfr.), Duebendorfstr. 333, 8051 Zurich. WTD 6/72.

36795—FINLAND—Wire wrap products for electronic industry. Exclusive distributorship. Hilvonen Technical Products Oy, Attn: Mr. Lasse Suuronen (importer, dist.), P.O. Box 201, 00250 Helsinki 25. WTD 7/72.

Motor vehicles, equipment

37141—BOLIVIA—Parts, accessories for passenger cars, trucks, busses. Sociedad Importadora de Automotivos Ltda. "Socieco", (importer, retailer), Avenida Montes 767, P.O. Box 701, La Paz. WTD 6/72.

37141—ISRAEL—Automotive air pollution control equipment, accesories. M.R.B. Engineering Supervision Ltd. (Importer, engineering consultants), 5 Sea Rd., P.O. Box 44550, Haifa. WTD in prep.

Ship building, repairing

37320—COLOMBIA—Lobster, crab and oyster fishing boats. Vikingos de Colombia S.A. (Mr. Adolfo Tabares-Montoya, Vice-Pres.) (Dist.), Albornoz Carretera Mamonal, Apartado Aereo 2358, Cartagena. WTD in prep.

Engineering, laboratory, scientific, research instruments

38112—COLOMBIA—Physics laboratory apparatus, instruments. Instrumentarium Ltda. (importer, agent, retailer), Carrera 9 No. 16-89, Apartado Aereo 9165, Bogota. WTD 11/71.

38113—SWITZERLAND—Drafting machines, drafting heads, slide rules, integrators, photogrammetric equipment, plan cutters, new type drafting aids. Requests exclusive sales rights. Franz Kuhlmann AG, Attn: A. Bertozzi (importer, dist.), Hardturmstr. 175, 8005 Zurich. WTD 8/71.

Instruments for measuring, indicating, controlling, physical characteristics

• 38200—KOREA—Supply of oxygen analyzers, chemox canisters, quick start chemox canisters, methanometers. Tender No. KFX-72108-PIII, bid deadline August 25. Invited by the Office of Supply, Government of the Republic of Korea, Seoul, Korea. Terms and specifications available on short-term loan basis from the Business, Photographic and Scientific Equipment Division, BDC-708, U.S. Dept. of Commerce, Washington, D.C. ★(202-967-2939).

• 38200—MALAYSIA—Supply of 130 remote sensing rain gauges (one MM tipping bucket type); 30 remote sensing rain gauges (0.5 MM tipping bucket type); 50 event rainfall recorders (record rainfall to nearest 6 minutes); 15 event rainfall recorders (record rainfall to nearest 2 minutes); 70 event water level recorders, float, counterweight sensing system for stilling-well operation. Tender documents available from the Director-General, Drainage-Irrigation Dept., Jalan Swettenham, Kuala Lumpur, Malaysia, on payment of M $10 (Malaysian $2.83 equals US $1.00). Bid deadline is August 30.

Photographic equipment, supplies

38610—GERMANY—All kinds of still and motion picture equipment; cameras, projectors, enlargers. Direct purchase & agency. Ing. Karl A. Marzik (dist., agent, exporter), 6236 Eschborn/Ts., Frankfurter Allee 19-21. WTD 7/72.

38610 — URUGUAY — Instant photographic identification systems for tamper-proof card making. IGA S.A. (importer, dist., retailer), Río Negro 1590, Casilla de Correo 1019 Sub-Central. WTD in prep.

38614—GERMANY—Microfilming equipment. Direct purchase & agency. B O G Buero Organisations Ges.mbH. (importer, dist., agent), 144 Heddernheimer Landstr., 6 Frankfurt/Main. WTD 7/72.

38615 — GUATEMALA — Photographic sensitized film, color and black and white. Correspondence requested in Spanish. Casa Avelar—Salvador Avelar G. (importer), 18 Calle 3-59, Zona 1, Guatemala City. WTD 7/72.

Watches, clocks, parts

• 38700—IRAN—Supply of 10 sets of automatic time-recorders with Persian or Latin figures. They should operate for at least 48 hours without electricity in case of breaking off 220 volt AC power. Tender No. 677/51, bid deadline September 3. Terms and specifications available from the Iranian Economic Mission, 2233 Wisconsin Ave., NW., Washington, D.C. 20007. A copy is available for review only, not for loan, in the Business, Photographic, and Scientific Equipment Division, Room 1128, U.S. Dept. of Commerce, Washington, D.C.

Toys, amusements, sporting goods

39491 — COLOMBIA — Fishing tackle, equipment. Vikingos de Colombia S.A. (Mr. Adolfo Tabares-Montoya, Vice-President), (dist.), Albornoz Carretera Mamonal, Apartado Aereo 2858, Cartagena. WTD in prep.

Pens, pencils, office, artists' materials

39522 — SWITZERLAND — Drawing boards, tables, pantographs, drafting film, hardware, drawing room accessories, new type drafting aids. Franz Kuhlmann AG (importer, dist.), Hardturmstr. 175, 8005 Zurich. WTD 8/71.

Costume jewelry, novelties, buttons, notions

39642 — JAMAICA — Fasteners, rivets, eyelets, buckles and buckle parts for use in manufacture of leather belts, wristbands, handbags. Carol Ferreira's Realty Ltd., Attn: Mr. Carol Ferreira (real es-

tate brokers, consultants), 69 Lady Musgrave Rd., P.O. Box 140, Kingston 8. WTD in prep.

Motor vehicle dealers, used

55210 — PHILIPPINES — Second hand used cars of different makes. Sy Hap Seng Co., Attn: Peter Sy, Mgr. (importer, dist.), 526-536 Camba St., Manila. WTD in prep.

Other Foreign Official Tenders

BOLIVIA—The Comite Pro Desarrollo Y Obras Publicas has issued Tender No. 23/72 for the supply of six (6) units of radio communications equipment. Bid deadline 5 p.m., August 28. Copies of tender announcement and specifications are available only from the Comite Pro Desarrollo Y Obras Publicas De Santa Cruz, Casilla 218, Santa Cruz, Bolivia.

ECUADOR—The Government has set a new registration date and bid deadline for the furnishing and equiping of 28 secondary schools. The final date for firms to register is now set for August 21, at 4 p.m. After this date documents for the tender can be obtained for the non-reimbursable sum of 5,000 sucres (approx. $200). The bid deadline is now set for 4 p.m., October 20. Interested parties must indicate (1) the country of origin of the commodities to be provided and (2) the name of their legal representative in Ecuador (full name and address). Registration can be made through the offices of the executive unit of the project, Calle Salinas 765, Quito (office 305).

Argentine Highway Bureau Asks For Bids On Road Construction

The Argentine Highway Bureau (Direccion Nacional de Vialidad) invites bids for paving a 27-kilometer section of National Highway No. 14 between Solari and Mercedes, Province of Corrientes. The budget, partially financed by IDB Loan No. 280/SF-AR, is 13.4 million Argentine pesos (US$1 = about 9.90 Argentine pesos). Deadline for submission of bids is Sept. 1. Conditions are available for 200 Argentine pesos from the above-named agency, Avda. Maipu 3, Division Licitaciones, 5° Piso, Buenos Aires. The tender number is 457/72.

Bolivia Announces Tenders For Communications Equipment

The Comite Pro Desarrollo Y Obras Publicas in Bolivia has issued tender no. 23/72 for supply of six units of radio communications equipment. Bid deadline is 5 p.m. Aug. 28.

Copies of tender announcement and specifications are available only from the Comite Pro Desarrollo Y Obras Publicas De Santa Cruz, Casilla 218, Santa Cruz.

Greece Extends Bid Deadline

The Hellenic Telecommunications Organization (OTE) has extended the bid deadline for Tender No. 6836 from Aug. 21 to Sept. 21.

Agencies

Specific foreign firms have expressed interest in agency agreements for the products listed below. Exclusive agencies for these products are wanted only if specified.

Field crop farms

01130 — TAIWAN — Wheat, corn, soybeans, green beans. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

Meat products

20119—TAIWAN—West coast cow hides (or cow/heifer). Scholar Enterprise Co., Ltd. (importer, agent, exporter), 2nd Fl., 9 Chih-feng St., Taipei 102. WTD 1/72.

20130 — UNITED KINGDOM — Canned meat. Kifaru Foods Ltd., Attn: C. J. Shah, Management Consultant, (importer, dist., exporter), 1027 Finchley Rd., Golders Green, London, NW11 7ES. WTD in prep.

Dairy products

20231—TAIWAN—Nonfat milk powder packed in polyethylene kraft paper bags. Good Luck Corp. (importer, agent, exporter), 3-1 Hoping West Rd., Sec. 3, Taipei 108. WTD in prep.

20232 — TAIWAN — Canned evaporated milk. Good Luck Corp. (importer, agent, exporter), 3-1 Hoping West Rd., Sec. 3, Taipei 108. WTD in prep.

Canning, preserving foods

20310 — UNITED KINGDOM — Canned fish. Kifaru Foods Ltd., Attn: C. J. Shah, Management Consultant (importer, dist., exporter), 1027 Finchley Rd., Golders Green, London NW11 7ES. WTD in prep.

20330 — UNITED KINGDOM — Canned fruits, canned vegetables. Kifaru Foods Ltd., Attn: C. J. Shah, Management Consultant (importer, dist. exporter), 1027 Finchley Rd., Golders Green, London NW11 7ES. WTD in prep.

20340 — UNITED KINGDOM — Dried peas, chip peas, black-eyed peas, lentils. Kifaru Foods Ltd., Attn: C. J. Shah, Management Consultant (importer, dist., exporter), 1027 Finchley Rd., Golders Green, London NW11 7ES. WTD in prep.

20341 — TAIWAN — Raisins. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

20370 — UNITED KINGDOM — Frozen fruits, fruit juices, vegetables, specialties. Gilbert J. McCaul & Co. Ltd., Attn: J. T. Clarke, Dir. (importer, agent, food broker), Airport House, Purley Way, Croydon CR9 4LX. WTD 6/72.

Grain mill products

20430 — TAIWAN — Instant oatmeal or cereal. Good Luck Corp. (importer, agent, exporter), 3-1 Hoping West Rd., Sec. 3, Taipei 108. WTD in prep.

Food preparations

20943 — TAIWAN — Fishmeal. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

20943—TAIWAN—Lanolin. Santa Enterprises Co., Ltd. (importer, agent, exporter), 2nd Fl., 61-1 Hoping East Rd., Sec. 2, Taipei 106. WTD in prep.

Broad woven fabric mills, manmade fiber, silk

22218 — SOUTH AFRICA — Shantung curtain fabrics: rayon acetate. A. S. Walker & Co. (Pty.) Ltd. (mfr's. agent), P.O. Box 1787, Cape Town, Cape Province. WTD 7/71.

Textile goods

22952 — SWITZERLAND — Poromeric materials, similar plastic-leather products. Stamm A. G., Mr. Heller, Dir. (importer, mfr.), 8193 Eglisau. WTD 7/72.

Paper mills

26210 — SWITZERLAND — Paper/pulp and board. Agency for COMECON market countries. Ferrolegeringar AG, Attn: Mr. Merk (agent), P.O. Box 277, 8034 Zurich. WTD in prep.

26211 — TAIWAN — Newsprint. Taiwan American Supply Service (importer, agent, exporter), 29 Tung Shan St., Taipei 100. WTD 7/72.

Industrial chemicals

28183—NETHERLANDS—Flavor materials for the tobacco, other industries. Exclusive agency. Hiam, N. V., Attn: Mr. van der Woude (importer, dist., agent), 106-108 Eleanor Rooseveltlaan, Amstelveen. WTD 3/72.

28192—THAILAND—Bleaching powder (chloride of lime) for textile mills. Estimated requirement 500 tons/yr. Requests c.i.f. Bangkok prices, brochures, literature, samples. Max Trading Ltd., Part. (importer, dist., agent), 300 Siphya Rd., Bangkok. WTD in prep.

28199—TAIWAN—Calcium diphosphate. Good Luck Corp. (importer, agent, exporter), 3-1 Hoping West Rd., Sec. 3, Taipei 104. WTD in prep.

Synthetic materials

28211—THAILAND—Laminated plastic. Requests c.i.f. Bangkok prices, catalogs, brochures. Viravan Co., Ltd. (importer, dist., agent), 2207 New Road, Bangkok 12. WTD 10/71.

28212—THAILAND — Sodium cellulose xanthate for producing cellophane. Requests c.i.f. Bangkok prices, samples, literatures. Eam Nguan Seng (importer, retailer), 1668 Near Wat Patoomkongka, Songwad Rd., Bangkok. WTD 6/72.

28232 — THAILAND — Viscose for producing cellophane. Requests c.i.f. Bangkok prices, samples, literatures. Eam Nguan Seng (importer, retailer), 1668 Near Wat Patoomkongka, Songwad Rd., Bangkok. WTD 9/72.

Drugs

28332 — NETHERLANDS — Medicinal chemicals, botanical products for pharmaceuticals agency. Exclusive agency. Hiam N.V., Attn: Mr. J. K. A. van der Woude (importer, dist., agent), 106-108 Eleanor Rooseveltlaan, Amstelveen. WTD 3/72.

28340 — PHILIPPINES — Pharmaceu-

ticals. Impex International Industries, Inc., Attn: Mr. Luisito B. Padilla, gen. mgr. (importer, dist., agent), Carolina Choy Bldg., Pasong Tamo Ext., Makati, Rizal. WTD in prep.

Paints, varnishes, lacquers, enamels

28510—FRANCE—Marine paints. Aqua-Marine-France (importer, dist.), 65, rue Henri-Barbusse, 93-Aubervilliers. WTD in prep.

Agricultural chemicals

28712—INDIA—Fertilizer, fertilizer raw materials. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

Chemical products

28930—TAIWAN—News printing ink. Taiwan American Supply Service (importer, agent, exporter), 29 Tung Shan St., Taipei 100. WTD 7/72.

28930—THAILAND—Ink for duplicating machines, packed in tubes. Exclusive distributorship franchise required. Requests c.i.f Bangkok prices, catalogs, brochures. Kang Yong Co., Ltd. (importer, dist., agent), 55/17-18 Phya Thai Rd., Near Athens Theatre, Bangkok 4. WTD in prep.

Paving, roofing materials

29522 — CANADA — Roofing materials, equipment. Ferrari Co., Attn: Bryan Winteler, gen. sales mgr. (dist., agent), 1111 Barmac Dr., Weston 485, Ontario. WTD in prep.

Products of petroleum, coal

29920 — SWITZERLAND — Lubricating compounds, greases, oils for aircraft. Zimex Ltd., Attn: Mr. H. Ziegler (importer, agent), Hönggerstr. 80, 8037 Zurich. WTD 6/72.

29990 — SWITZERLAND — Petroleum and especially coal products for metallurgical use. Agency for COMECON market countries. Ferrolegeringar AG, Attn: Mr. Merk (agent), P.O. Box 277, 8034 Zurich. WTD in prep.

Fabricated rubber products

30698 — THAILAND — Disconnecting sticks for use on high voltage switchgear, various length. Requests c.i.f. Bangkok prices, catalogs, brochures. Teo Hong Ltd., Part. (importers, dist., agent), 30-32 Chakrawad Rd., P.O. Box 710. WTD in prep.

Plastic products

30790 — JAPAN — Insulating materials for consumer, industrial, electrical, and/or electronic uses. Chiyoda Denshi Co., Ltd. (importer, agent), 5-12 Mita 2-chome, Meguro-ku, Tokyo. WTD 6/72.

30790 — SWITZERLAND — Plastic raw materials in form of powder, granulates. Agency for COMECON market countries. Ferrolegeringar AG, Attn: Mr. Merk (agent), P.O. Box 277, 8034 Zurich. WTD in prep.

30790 — SWITZERLAND — Plastic window screens. A. Kully Ag, Attn: Mr. Stutz (importer, mfr., agent), 4632 Trimbach. WTD in prep.

Leather tanning, finishing

31110 — SWITZERLAND — Leather, tanned and cured for industrial use. Agency for COMECON market countries. Ferrolegeringar AG (agent), P.O. Box 277, 8034 Zurich. Attn: Mr. Merk. WTD in prep.

Handbags, other personal leather goods

31720—UNITED KINGDOM—Presentation cases for individual items of jewelry; sundries items for use by the retail jeweler (not jewelry). Pollards of London Ltd., Attn: L. J. Wilson, sales mgr. (importer, dist., agent), Highbury Grove, London N5 2EE. WTD in prep.

Glass products

32316—NETHERLANDS—Scientific and laboratory glassware. Exclusive agency. Hiam N.V., Attn: Mr. van der Woude (importer, dist., agent), 106-108 Eleanor Rooseveltlaan, Amstelveen. WTD 3/72.

Abrasive, asbestos, nonmetallic mineral products

32914 — TAIWAN — Metal abrasives. Santa Enterprises Co., Ltd. (importer, agent, exporter), 2nd Fl., 61-1 Hoping East Rd., Sec. 2, Taipei 106. WTD in prep.

32970 — INDIA — Nonclay refractories, refractory materials. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1, WTD in prep.

Steel mill products

33122 — INDIA — Special alloy steel, stainless steel. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

33134 — INDIA — Ferroalloys produced in electric, other furnaces. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

Primary smelting, refining of nonferrous metals

33310—INDIA—Primary copper. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

33320—INDIA—Primary lead. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

33330—INDIA—Primary zinc. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

Rolling, drawing, extruding of nonferrous metals

33560—SWITZERLAND — Special nonferrous metals in sheets, bars, wire, etc. (e.g. magnesium, brass, zirconium; no aluminum or copper). Agency for COMECON market countries. Ferrolegeringar AG, Attn: Mr. Merk (agent), P.O. Box 277, 8034 Zurich. WTD in prep.

33570 — SWITZERLAND — Insulated electric wire and cable of all kinds. Agency for COMECON market countries. Ferrolegeringar AG, Attn: Mr. Merk (agent), P.O. Box 277, 8034 Zurich. WTD in prep.

Cutlery, hand tools, general hardware

34231 — NEW ZEALAND — Mechanic's hand service tools, namely pliers, ball-peen hammers, wrenches, screw drivers, etc. Exclusive agency. G. Fallows & Co. Ltd., Geoffrey Fallows, Mng. Dir. (importer, agent), 33 Rutherford Terrace, Remuera, Auckland. 5. WTD 7/72.

34231 — THAILAND — Adjustable vise-grip wrenches, automatic adjustment wrenches, adjustable grip lock. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Viravan Co., Ltd. (importer, dist., agent), 2207 New Road, Bangkok 12. WTD 10/71.

34232 — NEW ZEALAND — Hand operated edge tools for agricultural truck garden, and carpenters use, including axes, adzes, hatchets, planes, chisels, etc. Exclusive agency. G. Fallows and Co. Ltd., Attn: Geoffrey Fallows, Mng. Dir. (importer, agent), 33 Rutherford Terrace, Remuera, Auckland 5. WTD 7/72.

34291 — FRANCE — Marine hardware. Aqua-Marine-France (importer, dist.), 65, rue Henri-Barbusse, 93-Aubervilliers. WTD in prep.

34291 — SWITZERLAND — All kinds of of aircraft hardware. Zimex Ltd., Attn: Mr. H. Ziegler (importer, agent), Hönggerstr. 80, 8037 Zurich. WTD 6/72.

34292 — UNITED KINGDOM — Furniture castors, similar products within complementary fields. I. Bier & Son (Technical) Ltd., Attn: D. Bier, Mng. Dir. (consultants in international licensing), Audrey House, Ely Place, London, E.C. 1. WTD in prep.

34292—TAIWAN—Furniture hardware. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

34294—TAIWAN—Builders' hardware. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

Fabricated structural metal products

34422—SWITZERLAND—Novel types of window frames made from aluminum. A. Kully AG, Attn: Mr. Stutz (importer, mfr., agent), 4632 Trimbach. WTD in prep.

34433—THAILAND—Boilers, industrial, 20-500 h.p., 150 psi. upwards. Requests c.i.f. Bangkok prices, catalogs, brochures, literature. Max Trading Ltd., Part. (importer, dist., agent), 300 Siphya Rd., Bangkok. WTD in prep.

34435 — THAILAND — Stainless steel tanks for mixing medicine, capacity 100 litres. Requests c.i.f. Bangkok prices, catalogs, brochures. Beita Ltd., Part. (importer, dist., agent), 538/28 Phyathai Rd., P.O. Box 2241, Bangkok. WTD 6/72.

Fabricated metal products

34941—THAILAND—Gate valves, check valves, flat body sluice valves, air release valves, etc. for piping system. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Sathask - Driam (Thailand) Co., Ltd. (importer, mfr.), 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

34942—THAILAND — Fittings, accessories for all types of valves. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Sathask-Driam (Thailand) Co., Ltd. (importer, mfr) 93 Mansion 10, Rajdamnern Ave., Bangkok 2. WTD in prep.

Engines, turbines

35111 — THAILAND — Generator set units, 2,000 kw. Requests c.i.f. Bangkok prices, catalogs, brochures, technical data. The Far East General Business Co., Ltd. (importer, dist., agent), 120 Kasemkit Bldg., Silom Rd., Bangkok. WTD 3/72.

35197—TAIWAN—Stainless steel propeller shaft for marine diesel engines. Maritime Engineering Service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

Farm machinery

35228—HONDURAS—Grain cleaners for small operation (1 ton per dy). Impex de Honduras (importer, dist., agent), Apartado Postal 330, Tegucigalpa, D. C. WTD in prep.

35228 — NEW ZEALAND — Cultivation machinery and equipment and tools for use on small truck garden operations, namely cultivators, weeders, soil preparation equipment, sprayers, dusters, etc. Exclusive agency. G. Fallows & Co., Ltd., Attn: Geoffrey Fallows, Mng. Dir. (importer, agent), 33 Rutherford Terrace, Remuera, Auckland. 5. WTD 7/72.

Construction, mining, materials handling machinery, equipment

35316 — CANADA — Concrete handling equipment. Ferrari Co., Attn: Bryan Winteler, gen. sales mgr. (dist., agent), 1111 Barmac Dr., Weston 485, Ontario. WTD in prep.

35319—CANADA — Construction compaction equipment, handheld and self-propelled. Ferrari Co., Attn: Bryan Winteler, gen. sales mgr. (dist., agent), 1111 Barmac Dr., Weston 485, Ontario. WTD in prep.

35331—TAIWAN—Rotary oil field drilling machinery, equipment. Maritime Engineering Service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

35370 — FRANCE — Electric fork-lift truck (all sizes). Latil Batignolles (mfr.), 15 rue de Milan, 75 - Paris 9. WTD in prep.

Metalworking machinery

35415 — TAIWAN — Lathes. D-M-E Co., Ltd. (importer, agent, exporter), 3rd Fl., 28-2 Chien-Kuo North Rd., Taipei 104. WTD in prep.

35416 — TAIWAN — Milling machines. Pacific Keystone International (importer, agent, exporter), 123 Nanking East Rd., Sec. 3, Taipei 104. WTD in prep.

35418 — TAIWAN — Metal-working machinery for steel wire drawing, circular saws for cutting high-temperature (900° C) steel sections. Maritime Engineering Service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

35418—TAIWAN—Automatic precision multi-purpose metal-working machine tools. Santa Enterprises Co., Ltd. (importer, agent, exporter), 2nd Fl., 61-1 Hoping East Rd., Sec. 2, Taipei 106. WTD in prep.

35418—THAILAND—Grinding machines for pharmaceutical laboratories. Requests c.i.f. Bangkok prices, catalogs, brochures. Beita Ltd., Part. (importer, dist., agent), 538/28 Phyathai Rd., P.O. Box 2241, Bangkok. WTD 6/72.

35451—TAIWAN—Milling cutters. Pacific Keystone International (importer, agent, exporter), 123 Nanking East Rd., Sec. 3, Taipei 104. WTD in prep.

35451 — THAILAND — Copying tables (milling cutters) using to copy mill cam discs with internal and surface profiles and for shaped parts, generally mounted on vertical milling machines. Requests c.i.f. Bangkok prices, catalogs, brochures, technical data. Uniroyal Machinery & Equipment Co., Ltd. (importer, dist.), 107 Soi Swatdi, Ladprao, P.O. Box 107, Bangkok 10. WTD 2/72.

35452—TAIWAN — Precision measuring tools. D-M-E Co., Ltd. (importer, agent, exporter), 3rd Fl., 28-2 Chien-Kuo North Rd., Taipei 104. WTD in prep.

35453—TAIWAN—Toolroom specialties, including levels, angle irons, plates, squares, sine bars, V-blocks, flats, vises. Pacific Keystone International (importer, agent, exporter), 123 Nanking East Rd., Sec. 3, Taipei 104. WTD in prep.

35482—CANADA—Iron workers & machinery for shearing concrete reinforcement rods. Ferrari Co., Attn: Bryan Winteler, gen. sales mgr. (dist., agent), 1111 Barmac Dr., Weston 485, Ontario. WTD in prep.

35482—TAIWAN — Pneumatic-powered hand tools. Pacific Keystone International (importer, agent, exporter), 123 Nanking East Rd., Sec. 3, Taipei 104. WTD in prep.

35482 — TAIWAN — Electric grinders. D-M-E Co., Ltd. (importer, agent, exporter), 3rd Fl., 28-2 Chien-Kuo North Rd., Taipei 104. WTD in prep.

Special industry machinery

35513—GERMANY—Food packing and packaging machinery. Emball Maschinen GmbH. (importer, dist., agent), 6202 Wiesbaden-Biebrich, Breslauer Str. 14-16. WTD 7/72.

35513—HONDURAS—Machinery, equipment for processing, packaging precooked rice. Impex de Honduras (importer, dist., agent), Apartado Postal 330, Tegucigalpa, D. C. WTD in prep.

35531 — TAIWAN — Wood-working machinery for making baseball bats. Maritime Engineering Service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

35590 — COLOMBIA — Plastics, rubber, clay, concrete products machinery, equipment. Samudio & Asociados Ltda., Attn: Herman Samudio-Hein, Mgr. (agent), Avenida Jimenez No. 4-82 Piso 4, Apartado Aereo 9677, Bogota. WTD 1/72.

35595—THAILAND—Ovens, electric, for drying medicine, 50-cycle, 220-volt. Requests c.i.f. Bangkok prices, catalogs, brochures. Beita Ltd., Part. (importer, dist., agent), 538/28 Phyathai Rd., P.O. Box 2241, Bangkok 5. WTD 6/72.

General industrial machinery

35611—ITALY—Industrial pumps, except hydraulic fluid power. Ingg. Audoli & Bertola, S.p.A. (importer, dist., mfr.), Corso Vercelli 251, 10155 Torino. WTD 4/72.

35613—ITALY—Domestic water systems and pumps, including pump jacks, cylinders. Ingg. Audoli & Bertola, S.p.A. (importer, dist., mfr.), Corso Vercelli 251, 10155 Torino. WTD 4/72.

35615—ITALY—Single-unit measuring and dispensing pumps; lubricating oil outfits, pumps. Ingg. Audoli & Bertola, S.p.A. (importer, dist., mfr.), Corso Vercelli 251, 10155 Torino. WTD 4/72.

35640 — SWITZERLAND — Ventilating equipment, related parts. A. Kully AG, Attn: Mr. Stutz (importer, mfr., agent), 4632 Trimbach. WTD in prep.

35642—JAPAN—Air purification equipment. Matsushita Industrial Co., Ltd. (importer, dist., agent), 2 Kawarayamachi, Minami-ku, Osaka. WTD 8/71.

35642—SWITZERLAND—Filters for air conditioning, ventilating systems. A. Kully AG, Attn: Mr. Stutz (importer, mfr., agent), 4632 Trimbach. WTD in prep.

35660—SWITZERLAND — Maintenance free bush bearings made from synthetic materials or sintered metals, for application on machine tools, textile machinery, construction machines, etc. Small to medium bearings are of special interest. Wanner AG, Attn: Mr. Bernhard, Dir. (importer, mfr., agent), 8810 Horgen. WTD in prep.

35690—GERMANY—Packing and packaging machinery, non food. Emball Maschinen GmbH. (importer, dist., agent), 6202 Wiesbaden-Biebrich, Breslauer Str. 14-16. WTD 9/72.

35690 — HONDURAS — Machinery for producing toothbrushes; industrial brushes. Impex de Honduras (importer, dist., agent), Apartado Postal 330, Tegucigalpa, D. C. WTD in prep.

35690 — INDIA — Industrial Marking Equipment; stencil cutting machines, embossing machines, metal marking machines, imprinting machines. G. G. R. Enterprises (indent agent), 4-1 Madan St., Calcutta-13. WTD in prep.

35690 — SOUTH AFRICA — Labelling, pricing, overprinting machinery for self-adhesive labels. WTC Coastal (Pty.) Ltd. (mfr., agent), P.O. Box 152, Epping Industria, Cape Province. WTD 12/71.

35690—TAIWAN—Industrial machinery, parts. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

Office, computing, accounting machines

35720—THAILAND—Typewriters, English keyboard, manual & electric. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Kang Yong Co., Ltd. (importer, dist., agent), 55/17-18 Phyathai Rd., Near Athens Theatre, Bangkok. WTD in prep.

35733 — COLOMBIA — Electronic data computing and correcting systems, parts. Bescol Ltda. — Business Equipment & Supplies de Colombia Ltd. (Hernando Urrea, Mgr.) (importer, agent, retailer), Calle 19 No. 6-68, Oficina 505, Apartado Aereo 28491, Bogota. WTD in prep.

35741 — LEBANON — Palm-type calculating machines. Ets. Soubhi Mizrahi (importer, dist., agent), 20 Souk El-Jamil, P.O. Box 795, Beirut. WTD 4/72.

35741 — THAILAND — Calculating machines, 50-cycle, 220-volt. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Kang Yong Co., Ltd. (importer, dist., agent), 55/17-18 Phya Thai Rd., Near Athens Theatre, Bangkok 4. WTD in prep.

35791 — THAILAND — Duplicating machines, 50-cycle, 220-volt. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Kang Yong Co., Ltd. (importer, dist., agent), 55/17-18 Phya Thai Rd., Near Athens Theatre, Bangkok 4. WTD in prep.

Service industry machines

35820 — TAIWAN — Tailor-type presses. Maritime Engineering Service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

35820—THAILAND—Commercial laundry machines, such as washers, extractors, ironers, etc. Requests c.i.f. Bangkok prices, catalogs, brochures. Max Trading Ltd., Part. (importer, dist.,

agent), 300 Siphya Rd., Bangkok. WTD in prep.

35852 — FRANCE — Air conditioning equipment. Coldair (importer, dist.), 5, ave. de Nice, 06—Cagnes sur Mer. WTD in prep.

35853—FRANCE—Commercial refrigeration equipment. Coldair (importer, dist.), 5, ave. de Nice, 06—Cagnes sur Mer. WTD in prep.

35853—UNITED KINGDOM—Unit coolers for commercial refrigeration installations, i.e. butcher's cold rooms and walk in cold stores, etc. Capacities should cover 4,500 BTU/hr.—36,000 BTU/hr.; coolers should have defrost arrangements. Custom Coils Ltd., Attn: M. L. Portlock (mfr.), Solent Industrial Estate, Hedge End, Southampton, Hants. WTD in prep.

35853—SWITZERLAND—Beer and general beverage dispensing equipment for restaurants, bars, etc., food storage and transportation cabinets, heated or cooled; ice making machines, ice boxes. Firma Hadorn, Automaten & Neuheiten, Attn: Mr. Hadorn, President (importer, agent), Ruettistrasse 2, 3052 Zollikofen. WTD in prep.

35857—IVORY COAST—Air conditioners for passenger cars. Requests offers within 30 days. Correspondence requested in French, Monsieur Becker Bousalah, SIFA (Société Ivoirienne de Froid Automobile) (retailer), Boîte Postale 4490, Abidjan. WTD in prep.

35860 — SWITZERLAND — Small high pressure pumps for laboratories. S. Portmann, Wissenschaftliche Instrumente (importer, mfr., agent), Steinenschaze 4, 4056 Basel. WTD 7/72.

35891—SWITZERLAND—Cafeteria type food warming equipment, microwave ovens, fryers. Firma Hadorn, Automaten Neuheiten, Attn: Mr. Hadorn, President (importer, agent), Ruettistr. 2, 3052 Zollikofen. WTD in prep.

35892—JAPAN—Water, sewage purification equipment. Matsushita Industrial Co., Ltd. (importer, dist., agent), 2 Kawaraya-machi, Minami-ku, Osaka. WTD 8/71.

35892—SWITZERLAND — Water treatment equipment. A. Kully AG, Attn: Mr. Stutz (importer, mfr., agent), 4632 Trimbach. WTD in prep.

Machinery

35990—SWITZERLAND—Food wagons of all kinds for use in restaurants, hotels, including wagons for beverages equipped with ice-box. Firma Hadorn, Automaten Neuheiten, Attn: Mr. Hadorn, President (importer, agent), Ruettistr. 2, 3052 Zollikofen. WTD in prep.

Electrical transmission, distribution

36113 — FRANCE — Elapsed time indicators. Socitec S.A. (importer, agent), 13, rue Dautencourt, Paris 17. WTD in prep.

36121—THAILAND—Distribution transformers, up to 33 KVA. Requests c.i.f. Bangkok prices, catalogs, brochures, technical data. The Far East General Business Co., Ltd. (importer, dist., agent), 120 Kasemkit Bldg., Silom Rd., Bangkok. WTD 3/72.

Electrical industrial apparatus

36210—PAKISTAN—Electric generators, A.C. between 25 K.W. to 75 K.W. Requests catalogs, quotations, C. & F., Karachi. R. B. Avari & Co. Ltd. (importer, agent), Jellani House, Opp. Mereweather Tower, M. A. Jinnah Rd., Karachi. WTD in prep.

36212 — FRANCE — Impulse generators, function generators; programmable power supply. Rohde & Schwarz France (agent, retailer), 33, Blvd. Berthier, Paris 17. WTD in prep.

36232—ARGENTINA—Wolfram and silver electrodes for spectrographs. Huber Argentina S.A.C.I. (importer, dist., agent), Florida 165, Of. 326, Buenos Aires. WTD in prep.

Household appliances

36360—TAIWAN—Industrial sewing machines. Marine Engineering Service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

Electric lighting, wiring equipment

36425 — THAILAND — Telescopic street poles, 8 m. long, for power distribution system. Requests c.i.f. Bangkok prices, brochures, technical data. Teo Hong Ltd., Part. (importer, dist., agent), 30-32 Chakrawad Rd., P.O. Box 710, Bangkok. WTD in prep.

Communication equipment

36610—ISRAEL—Telephone and telegraph apparatus, equipment and components to include telephone switching and switchboard equipment; dial automatic telephone (central office, PABX/toll), electronic switching equipment; telephone carrier equipment/repeater equipment (open-wire and cable transmission); telephone instrument sets—transmitters/receivers, push-button/type/other; teleprinter units; telegraph switching/carrier systems; data sets/digital or analog; mostly for assembly in Israel. Exclusive agency. Trint Co. Ltd. (importer, dist., agent), 5 Kordova St., Tel Aviv. Cable: TRINTCO TELAVIV. WTD in prep.

36620 — ISRAEL — Radio/television detection equipment and apparatus; electric alarm and signal systems and devices; railroad/highway grade crossing signals; safety control equipment; electronic search and detection apparatus including radar, infrared, sonar. Exclusive agency. Trint Co. Ltd. (importer, dist., agent), 5 Kordova St., Tel Aviv. WTD in prep.

36622—COLOMBIA—Closed circuit television systems, equipment. Vargas, Reiner & Cia. Ltda., Attn: Daniel Vargas-Gutierrez (importer, agent), Apartado Aereo 25659, Bogotá. WTD in prep.

36623 — COLOMBIA — Electric alarms, signal systems. Vargas, Reiner & Cia. Ltda., Attn: Daniel Vargas-Gutierrez (importer, agent), Apartado Aereo 25659, Bogota. WTD in prep.

36623 — IRAN — Alarm and signal systems; electric, electronic. Parvahan Co. (importer, dist., agent), 162 Iranshahr Ave., Tehran. WTD 12/71.

36623—IRAN—Alarm and signal systems; electric, electronic. Parosan Co. Ltd. (importer, dist., agent), Ave. Soraya, Tehran, Corner of Iranshahr. WTD 7/71.

36623—IRAN—Alarm and signal systems; electric, electronic. Daftar-Machine Co. Ltd. (importer, dist., agent), Roosevelt/Abbas Abad Crossroad, Tehran, P.O. Box 11/1385. WTD 6/71.

36625—PARAGUAY—Electronic surveillance equipment for police, private investigators, related activities. Alfredo Poggio (agent), Santa Rosa 231, Asuncion. WTD in prep.

36625—TAIWAN—Radar bright display equipment (latest model). Western Enterprises, Ltd. (importer, agent, exporter), 47 Kaifeng St., Sec. 1, Taipei 100. WTD 11/71.

Electronic components, accessories

36710—ISRAEL—Electron tubes, receiving type. Trint Co. Ltd. (importer, dist., agent), 5 Kordova St., Tel Aviv. WTD in prep.

36740—AUSTRIA — Electronic components, semiconductors, integrated circuits (monolithic), modules. Rudolf Krebs, Industrie-und Labor-Datentechnik (importer, agent, exporter), Liechtensteinstrasse 6, A-1090 Vienna. WTD in prep.

36740—ISRAEL—Semiconductors (integrated microcircuits); transistors; diodes/rectifiers; other semiconductor devices to include solar cells, zener diodes, parts, etc. Trint Co. Ltd. (importer, dist., agent), 5 Kordova St., Tel Aviv. WTD in prep.

36790 — ISRAEL — Capacitors/resistors for electronic applications; coils, transformers, reactors, chokes, other electronic components, accessories including parts for electron tubes. Exclusive agency. Trint Co. Ltd. (importer, dist., agent), 5 Kordova St., Tel Aviv. WTD in prep.

36792—TAIWAN—Electronic application capacitors, condensers. Fortune Trading Corp. (importer, agent, exporter), 96 Chungshan North Rd., Sec. 2, Taipei 104. WTD in prep.

36795—INDIA—Electronic industry components, accessories. METALCO Traders (agent), P-22 Swallow Lane, Calcutta-1. WTD in prep.

36795—TAIWAN—Video tape. Chian Yi Enterprise Co., Ltd. (importer, agent, exporter), P.O. Box 58863, Taipei. WTD in prep.

Electrical machinery, equipment

36940—FRANCE—Electrical equipment for boats. Aqua-Marine-France (importer, dist.), 65 rue Henri-Barbusse, 93-Aubervilliers. WTD in prep.

Motor vehicles, equipment

37113 — THAILAND — Fire department vehicles, for airport crash use. Request c.i.f. Bangkok prices, catalogs, brochures. The Far East General Business Co., Ltd. (importer, dist., agent), 120 Kasemkit Bldg., Silom Rd., Bangkok. WTD in prep.

37141 — THAILAND — Spare parts for vehicles, Ford, Chrysler & Willy-Jeep. Requests c.i.f. Bangkok prices, catalogs, brochures. S. Siam Phanich Ltd., Part. (importer, agent, retailer), 127 Chalermkhet 1 Rd., Suan Mali, Bangkok. WTD in prep.

Aircraft, parts

37224—SWITZERLAND — Replacement parts for jet and piston aircraft engines Pratt & Whittney, Lycoming and Arson. Zimex Ltd., Attn: Mr. H. Ziegler (importer, agent), Hönggerstr. 80, 8037 Zurich. WTD 6/72.

37291—SWITZERLAND—Aircraft parts, auxiliary equipment including Sikorsky helicopters. Zimex Ltd., Attn: Mr. H. Ziegler (importer, agent), Hönggerstr. 80, 8037 Zurich. WTD 6/72.

Ship building, repairing

37313—HONDURAS — Shrimp fishing

boats, including processing, storage equipment. Impex de Honduras (importer, dist., agent), Apartado Postal 330, Tegucigalpa, D.C. WTD in prep.

37320—FRANCE—Boat building and repairing (accessories all kinds). Aqua-Marine-France (importer, dist.), 65 rue Henri-Barbusse, 93-Aubervilliers. WTD in prep.

37320 — UNITED KINGDOM — Yachts, yacht fittings, navigational equipment. Carl Ziegler Yacht Agency (importer, dist., retailer), 22 New Quebec St., London, W.1. WTD 6/72.

Engineering, laboratory, scientific, research instruments

38112—AUSTRIA — Electronic measuring and test instruments for laboratory, scientific applications. Rudolf Krebs, industrie-und Labor-Dantentechnik (importer, agent, exporter), Liechtensteinstrasse, 6, A-1090 Vienna. WTD in prep.

38112—FRANCE — Automatic washing machines for glassware, laboratory instruments (ultrasonic or not). Les Instruments Scientifiques Modernes (importer, dist., mfr.), 8, rue de Montauban, Paris 15. WTD in prep.

38112 — IRAN — Scientific instruments. Quantities, specifications to be determined through direct correspondence. Exclusive agency. Owzan Co., Ltd. (importer, dist., agent), 290 Villa Ave., Tehran. WTD 4/72.

38112—NETHERLANDS — Laboratory, scientific instruments, apparatus. Exclusive agency. Hiam N.V.; Attn: Mr. van der Woude (importer, dist., agent), 106-108 Eleanor Rooseveltlaan, Amstelveen. WTD 3/72.

38112—SWITZERLAND — Liquid chromatographs, accessories, e.g. UV detectors, PH meters, similar instruments for laboratory use. S. Portmann, Wissenschaftliche Instrumente (importer, mfr., agent), Steinenschanze 4, 4056 Basel. WTD 7/72.

38112 — SWITZERLAND — Geophysical instruments; soil-testing apparatus; road-testing instruments; advanced products for civil engineering and building trade; for use in laboratories or in situ; for testing of soil, rock, concrete, bitumen, water. MAP AG, Attn: Mr. J.-Cl. Gressin, Mng. Dir. (dist., agent), Theaterplatz 8, 3000 Bern. WTD 6/72.

Instruments for measuring, indicating, controlling, physical characteristics

38211—SWITZERLAND — Aircraft engine instruments. Zimex Ltd., Attn: Mr. H. Ziegler (importer, agent), Höngerstr. 80, 8037 Zurich. WTD 6/72.

38213—AUSTRIA — Industrial process instruments, complete process control systems. Rudolf Krebs, Industrie-und Labor-Datentechnik (importer, agent, exporter), Liechtensteinstrasse 6, A-1090 Vienna. WTD in prep.

38216 — SWITZERLAND — Geophysical measuring instruments; road construction and measuring instruments; advanced products only. MAP AG, Attn: Mr. J.-Cl. Gressin, Mng. Dir. (dist., agent), Theaterplatz 8, 3000 Bern. WTD 6/72.

Optical instruments, lenses

38311 — ARGENTINA — Spectrometers, optical instruments. Huber Argentina S.A.C.I. (importer, dist., agent), Florida 165, Of. 326, Buenos Aires. WTD in prep.

Surgical, medical, dental instruments

38410 — NETHERLANDS — Surgical, medical instruments, apparatus. Exclusive agency. Hiam N.V.; Attn: Mr. van der Woude (importer, dist., agent), 106-108 Eleanor Rooseveltlaan, Amstelveen. WTD 3/72.

38423—TAIWAN—Gas masks. Maritime Engineering service (agent, engineering), P.O. Box 265, Taipei. WTD in prep.

38430—NETHERLANDS—Dental instruments, apparatus. Exclusive agency. Hiam N.V.; Attn: Mr. van der Woude (importer, dist., agent), 106-108 Eleanor Rooseveltlaan, Amstelveen. WTD 3/72.

Photographic equipment, supplies

38611—SWEDEN—Slide and film projectors for advertising displays; parts, attachments, accessories. Nord-Agentur, T. Nordelöf (importer, agent), Box 11022, S-720 11 Vasteras. WTD 6/72.

38612—THAILAND—Photo-copying machines, 50-cycle, 220-volt. Requests c.i.f. Bangkok prices, catalogs, brochures. Exclusive distributorship franchise required. Kang Yong Co., Ltd. (importer, dist., agent), 55/17-18 Phya Thai Rd., Bangkok 4. WTD in prep.

Toys, amusement, sporting goods

39410—JAPAN—Handicraft sets, including paint by numbers, tobacco pipe making sets, sophisticated model construction sets, etc. for indoor adult hobbies. Fukuoka Chikuma & Co., Ltd. (dist., agent), 3-29 Tenyo-machi, Kukuoka City, 812. WTD 5/72.

Pens, pencils, office, artists' materials

39550—THAILAND—Carbon paper, various sizes. Exclusive distributorship franchise required. Requests c.i.f. Bangkok prices, catalogs, brochures. Kang Yong Co., Ltd. (importer, dist., agent), 55/17-18 Phya Thai Rd., Near Athen Theatre, Bangkok 4. WTD in prep.

Manufacturing industries

39931—FRANCE—Luminous advertising signs. COTEP S.A. (importer, dist., agent), 7-9 ave. Charles Martigny, 94-Maisons-Alfort. WTD 6/72.

39932—SWEDEN — Advertising display novelties, display cases. Nord-Agentur, T. Nordelöf (importer, agent), Box 11022, S-720 11 Vasteras. WTD 6/72.

39933—GERMANY—Letters from plastic, metal, wood or board for advertising signs. Neuwaelder K.G. (importer, dist.), 12 Friedrichstr., 3500 Kassel. WTD 7/72.

Visiting Buyers And Officials

ARGENTINA—Eduardo O. Meisen, managing partner, Talleres Meisen S.R.L., Villa de Lujan 2501, R. de Escalada, Pcia, de Buenos Aires, interested in contacting U.S. manufacturers of **automobile oil filters** to discuss licensing agreement, requesting technical information. Aug. 4 via New York for two weeks. c/o Eduardo O. Meisen, Argentine Consulate General, New York. Itinerary: New York, Chicago, Cleveland, Longmont (Colo.). WTD in prep.

BRAZIL—Peter Koebsch, Herbert Ferramentas e Maquinas Ltd., R. Visconde de Inhauma 50, s/1217, Rio de Janeiro, interested in **machine and tools** importation. Aug. 1 via New York, about two weeks. c/o Brazilian Consulate General, 630 5th Ave., New York, N. Y. 10020. Itinerary: Seneca Falls (N.Y.), Chicago, Cleveland. WTD 8/70 under revision.

ISRAEL—Moishe Muller, manager, Food & Technical Supplies Ltd., 123 Allenby Rd., Tel Aviv, interested in exclusive representation for American manufacturers of **dishwashers and mixers** for large kitchens. July 17 via New York for one month. c/o Israeli Embassy, Commercial Section, New York. Itinerary: New York, Everett (Mass.), Miami, Phoenix. WTD 7/31/71.

ISRAEL—Yehid Levin, Director, Autocall Co., Ltd., Haifa, interested in representations of American manufacturers of **large and small trucks for transportation of containers.** Plans an initial purchase of 20 such trucks, wishes to visit potential plants. Via New York August 8 for one month. c/o Morris Mendel, Berwick Builders, 1064 E. Livingstone Ave., Columbus, Ohio 43205. Itinery: New York area, Chicago, Columbus. WTD in prep.

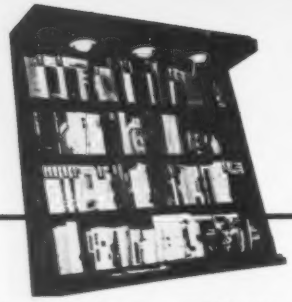
KOREA—Park Sang-do, Engineering Director, Tong Jin Trading Co., Seoul, interested in licensing agreement to manufacture **chemical compounds (water and oil-treating chemicals) and procurement of chemical processing equipment.** Via South Bend, Ind., July 30 for about two weeks. c/o Industrial Chemicals, Inc., P.O. Box 1045, South Bend, Ind. 46624. Itinerary: South Bend, Chicago, New York. WTD 6/71.

NEW ZEALAND—Richard G. MacKinnon, of Fletcher Timber, Auckland, interested in **lumber** for the New Zealand market, namely **redwood, cedar, Oregon and spruce.** Requesting technical information generally related to the lumber industry and lumber usage. Via Los Angeles August 5 for 22 days. c/o Hotel Mayflower, 535 S. Grand Ave., Los Angeles, Calif. 90017. WTD under prep.

NEW ZEALAND—A. A. Henderson, managing director, P. & W. Henderson Lts., P.O. Box 22-125, Christchurch, interested in importing **textiles and industrial fabrics, manual & electric hand tools, photographic and jewelry store items.** Sept. 1 via Honolulu. c/o New Zealand Government Trade Commissioner, 153 Kearny St., San Francisco, Calif. 94108, and 630 Fifth Ave., New York, N. Y. 10021. Itinerary: Honolulu, San Francisco; Los Angeles; New York City. WTD in prep.

NEW ZEALAND—Peter Jack McWilliam, chief engineer, Christchurch Drainage Board, Box 13006, Christchurch, interested in **treatment of slaughterhouse wastes** in ponds; removal of nutrients from waste water; barrier control of tidal estuaries. Via New York, Aug. 10 for three weeks. c/o New Zealand Consulate General, Suite 530, 630 Fifth Ave., New York, N. Y. 10020. Itinerary: New York City and elsewhere, depending on contacts.

SOUTH AFRICA—S. M. Paruk, South African Importers Agency, P.O. Box 3077, Durban, interested in contacting **textile piece goods** exporters desiring representation in South Africa. Via San Francisco for about two weeks, arriving Aug. 10. c/o South African Consulate General, 360 Pine St., San Francisco, Calif. 94104. Itinerary: San Francisco, Los Angeles, New York. WTD in prep.



New Publications

When ordering any publications, indicate title and series designation, if indicated, and make checks or money orders payable to the Superintendent of Documents. Orders should be sent to the U.S. Department of Commerce, Washington, D.C. 20230, or to any of its field offices.

DOMESTIC AND INTERNATIONAL BUSINESS

BUREAU OF DOMESTIC COMMERCE

Construction review. Monthly industry report. June 1972. Vol. 18, No. 6 Annual subscription $6.50 ($1.75 more for foreign mailing). Single copy 55¢.

BUREAU OF INTERNATIONAL COMMERCE

Export control bulletin—supplement to Export control regulations (ECB-OEC-65). Subject: exports of cattlehides. 40¢.

Market share reports catalog. (COM-72-90013). May 1972. 20 pp. Free.

International Marketing Information Service

Foreign Economic Trends

Annual subscription $15 ($6 more for foreign mailing). Single copy 10¢.

Dominican Republic (ET 72-063). 8pp.
Libya (ET 72-064). 12pp.
South Africa (ET 72-066). 12pp.
Jordan (ET 72-067). 12pp.
Chile (ET 72-068). 8pp.

Overseas Business Reports

Annual subscription $16 ($5 more for foreign mailing). Single copy 15¢.

Establishing a business in Hong Kong (OBR 72-018). 28pp.

Foreign trade regulations of the Empire of Ethiopia (OBR 72-023). 8pp.

Foreign trade regulations of Spain (OBR 72-024). 12pp.

The use of market share reports—commodity report on electric measuring and controlling instruments (OBR 72-026). 8pp.

Establishing a business in Mexico (OBR 72-027). 32pp.

Selling in Austria (OBR 72-029). 20pp.

World Markets for U.S. Exports

Industrial and scientific instruments—Germany (IMIS 72-217). 12pp. 10¢

ECONOMIC AFFAIRS

SOCIAL AND ECONOMIC STATISTICS ADM.

BUREAU OF ECONOMIC ANALYSIS

Business conditions digest. Series ES1 No. 82-6. Data through May. Annual subscription $15 ($3.75 more for foreign mailing). Single copy $1.50.

Survey of current business. Vol. 52, No. 6. June 1972. Annual subscription, including weekly statistical supplement, $9 ($3.75 more for foreign mailing). Single copy $1.

BUREAU OF THE CENSUS

Congressional District Data

Districts of the 93d Congress:

New Jersey (CDD-93X-27). 12pp. 25¢.

Virginia (Revised) (CDD-93X-42). 8pp. 25¢. This report supercedes the report issued for Virginia in January 1972 (CDD-93X-42); the 1971 congressional redistricting law on which that report was based was invalidated.

Construction and Housing

Residential alterations and repairs—expeditures on residential additions, alterations, maintenance and repairs, and replacements: first quarter 1972 (C50-71-Q1). Annual subscription, including 2-part annual report, $1.50. Single copy 25¢.

Housing starts: May 1972 (C20-72-5). Annual subscription $2. Single copy 20¢.

1970 Census of Housing

Metropolitan Housing Characteristics by Standard Metropolitan Statistical Areas

Anaheim-Santa Ana-Garden Grove, Calif. (HC(2)-10). 140pp. $1.25.
Cedar Rapids. (HC(2)-38). 43pp. 55¢
Chicago. (HC(2)-44). 200pp. $1.75.
Des Moines, Iowa (HC(2)-59). 52pp. 55¢.
Dubuque, Iowa (HC(2)-61). 48pp. 55¢.
Kansas City. (HC(2)-101). 112pp. $1.
New York. (HC(2)-149). 136pp. $1.25.
Rockford, Ill. (HC(2)-183). 48pp. 55¢.
Sacramento. (HC(2)-184). 92pp. $1.
San Diego. (HC(2)-194). 100pp. $1.
San Francisco-Oakland, Calif. (HC(2)-195). 216pp. $1.75.
San Jose, Calif. (HC(2)-196). 104pp. $1.
Santa Barbara. (HC(2)-197). 56pp. 60¢.
Washington, D.C. (HC(2)-232). 120pp. $1.

Distribution and Services

Monthly selected services receipts (BS-72-5). Annual subscription $1. Single copy 10¢.

Advance monthly sales: June 1972 (CB-72-169). 2pp. 10¢.

Weekly retail sales. Estimated sales of U.S. retail stores, week ending July 8 (CB-72-177). 2pp. 10¢.

Weekly retail sales. Estimated sales of U.S. retail stores, week ending July 15 (CB-72-184). 2pp. 10¢.

Selected services—special report: establishment and firm size (BC67(S)SS1). 72pp. 65¢.

Foreign Trade

General imports—cotton manufacturers: May 1972 (FT-130-72-5). Annual subscription $1. Single copy 10¢.

Waterborne exports and general imports: April 1972 (FT-985-72-4). July 1972. Annual subscription (FT-900, 975, 985, and 986 combined) $3. Single copy 10¢.

Governments

State Government finances in 1971 (GF 71 No. 3). June 1972. 64pp. 60¢.

Industry

Annual survey of manufactures: 1970 (M70(AS)-10). Industry profiles. June 1972. 272pp. $3.

Fats and oils—vegetable oil crushers: summary for 1971 (Series: M20J-(71)-13). 14pp. Subscription $3 per year (incl. M20K0). Single copy 15¢.

Inorganic fertilizer materials and related acids: summary for 1971 (preliminary) (Series: M28B(71)-13). $1.50 per year.

Asphalt and tar roofing and siding products: summary for 1971 (Series: M29A (71)-13). $1.50 per year. Single copy 15¢.

Glass containers: summary for 1971 (Series: M32G(71)-13). Subscription $1.50 per year. Single copy 15¢.

Typewriters: summary for 1971 (Series: M35C(71)-13). $1.75 per year, (incl. MA-35R). Single copy 15¢.

Fibrous glass: 1971 (Series: MA-32J (71)-1). Single copy 25¢.

Inventories of brass and copper wire mill shapes: first quarter 1972 (Series: MQ-33K(72)-1). $1.50 per year, (incl. M33K).

Manufacturers' shipments, inventories, and orders: 1966-1972 (revised) (Series: M3-1.4). Single copy 70¢.

Population

The social and economic status of the black population in the United States, 1971 (Series P-23, No. 42). 168pp. $1.25.

Characteristics of low-income population: 1971 (Series P-60, No. 82). 12pp. 15¢.

1970 Census of Population

General Social and Economic Characteristics:

Pennsylvania (PC(1)-C40). 495pp. $3.50.
New York (PC(1)-34). 475pp. $3.25.
Texas (PC(1)-245). 899pp. $6.
California (PC(1)-C6). 823pp. $5.75.
Illinois (PC(1)-C15). 563pp. $3.75.
Iowa (PC(1)-C17). 355pp. $2.50.

Mobility, commuting, and veteran status for the United States: 1970 (PC(S1)-19). 4pp. 10¢.

Educational characteristics of the Population of the United States: 1970 (PCS1)-20). 4pp. 10¢.

Surveys of components of inventory change and residential finance: principal data-collection forms and procedures (PHC(R)-4). 40pp. 45¢.

Low-Income Area Employment Profiles

Selected rural counties in Appalachia (PHC(3)-70). 306pp. $2.50.

Selected rural counties in North Carolina (PHC(3)-74). 252pp. $2.

Selected rural counties in New Mexico (PHC(3)-75). 244pp. $2.

Zuni Reservation, N. Mex. (PHC(3)-76). 110pp. $1.

☆ U. S. Government Printing Office: 1972—511-340/2

Commerce Department Directory

Commerce Building, 14th Street and Constitution Avenue, Washington, D.C. 20230

Phone (202) 783-9200

PETER G. PETERSON, Secretary of Commerce

JAMES T. LYNN, Under Secretary of Commerce

SECRETARIAL OFFICERS

ROBERT A. PODESTA, Asst. Secretary for Economic Development (Economic Development Administration)

GUY W. CHAMBERLIN, Acting Asst. Secretary for Administration

HAROLD C. PASSER, Asst. Secretary for Economic Affairs (Social and Economic Statistics Administration)

J. H. WAKELIN, JR., Asst. Secretary for Science and Technology

ROBERT J. BLACKWELL, Asst. Secretary for Maritime Affairs (Maritime Administration)

JAMES L. HAMILTON III, Acting Asst. Secretary for Tourism (United States Travel Service)

WILLIAM N. LETSON, General Counsel

ANDREW E. GIBSON, Asst. Secretary for Domestic and International Business

HEADS OF OPERATING UNITS

ROBERT M. WHITE, National Oceanic and Atmospheric Administration

WILLIAM V. HOYT, Office of Foreign Direct Investments

ROBERT GOTTSCHALK, Patent Office

LAWRENCE M. KUSHNER, Acting, National Bureau of Standards

GEORGE H. BROWN, Bureau of the Census

MARINUS van GESSEL, Acting, Bureau of International Commerce

HUDSON B. DRAKE, Bureau of Domestic Commerce

GEORGE JASZI, Bureau of Economic Analysis

JOHN M. RICHARDSON, Acting, Office of Telecommunications

WILLIAM T. KNOX, National Technical Information Service

JOHN L. JENKINS, JR., Office of Minority Business Enterprise

OMBUDSMAN FOR BUSINESS
Thomas E. Drumm, Jr.

BUSINESS SERVICES FIELD OFFICES

ALBUQUERQUE, N.MEX., 87101, Room 316, U.S. Courthouse. Area Code 505, 843-2386.

ANCHORAGE, ALASKA, 99501, 632 West Sixth Ave., Hill Bldg., Suite 412, Area Code 907, 272-6531.

ATLANTA, GA., 30309, Suite 523, 1401 Peachtree St., NE. Area Code 404, 526-6000.

BALTIMORE, MD., 21202, 415 U.S. Customhouse, Gay and Lombard Sts. Area Code 301, 962-3560.

BIRMINGHAM, ALA., 35205, Suite 200-201, 908 S. 20th St. Area Code 205, 325-3327.

BOSTON, MASS., 02116, 10th Floor, 441 Stuart St. Area Code 617, 223-2312.

BUFFALO, N.Y., 14202, Room 910, Federal Bldg., 111 W. Huron St., Area Code 716, 842-3208.

CHARLESTON, S.C., 29403, Federal Bldg., Suite 631, 334 Meeting St. Area Code 803, 577-4171.

CHARLESTON, W.VA., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. Area Code 304, 343-6181 Ext. 375 and 376.

CHEYENNE, WYO., 82001, 6022 Federal Bldg., 2120 Capitol Ave. Area Code 307, 778-2220.

CHICAGO, ILL., 60604, 1486 Dirksen Bldg., 219 S. Dearborn St. Area Code 312, 353-4461.

CINCINNATI, OHIO, 45202, 8028 Federal Office Bldg., 550 Main St. Area Code 513, 684-2944.

CLEVELAND, OHIO, 44114, Room 600, 666 Euclid Ave. Area Code 216, 522-4750.

DALLAS, TEX., 75202, Room 3E7, 1100 Commerce St. Area Code 214, 749-3287.

DENVER, COLO., 80202, Room 161, New Custom House, 19th and Stout Sts., Areas Code 303, 837-3246.

DES MOINES, IOWA, 50309, 609 Federal Bldg., 210 Walnut St. Area Code 515, 284-4222.

DETROIT, MICH., 48226, 445 Federal Bldg. Area Code 313, 226-6088.

GREENSBORO, N.C., 27402, 258 Federal Bldg., W. Market St., P.O. Box 1950, Area Code 919, 275-9111.

HARTFORD, CONN., 06103, Room 610-B, Federal Office Bldg., 450 Main St. Area Code 203, 244-3530.

HONOLULU, HAWAII, 96813, 286 Alexander Young Bldg., 1015 Bishop St. Area Code 808, 546-8694.

HOUSTON, TEXAS, 77002, 201 Fannin, 1017 Federal Office Bldg., Area Code 713, 226-4231.

JACKSONVILLE, FLA., 32207, Suite 129, 4080 Woodcock Drive, Area Code 904, 791-2796.

KANSAS CITY, MO., 64106, Room 1840, 601 E. 12th St. Area Code 816, 374-3141.

LOS ANGELES, CALIF., 90024, 11201 Federal Bldg., 11000 Wilshire Blvd. Area Code 213, 824-7591.

MEMPHIS, TENN., 38103, 710 First American Bank Bldg., 147 Jefferson Ave. Area Code 901, 534-3214.

MIAMI, FLA., 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. Area Code 305, 350-5267.

MILWAUKEE, WIS., 53203, Straus Bldg., 238 W. Wisconsin Ave. Area Code 414, 224-3473.

MINNEAPOLIS, MINN., 55401, 306 Federal Bldg., 110 S. Fourth St. Area Code 612, 725-2133.

NEW ORLEANS, LA., 70130, 909 Federal Office Bldg., S., 610 South St. Area Code 504, 527-6546.

NEW YORK, N.Y., 10007, 41st Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. Area Code 212, 264-0634.

PHILADELPHIA, PA., 19107, Jefferson Bldg., 1015 Chestnut St. Area Code 215, 597-2850.

PHOENIX, ARIZ., 85004, 508 Greater Arizona Savings Bldg., 112 N. Central Ave. Code 602, 261-3285.

PITTSBURGH, PA., 15222, 431 Federal Bldg., 1000 Liberty Ave., Area Code 412, 644-2850.

PORTLAND, ORE., 97205, 921 S.W. Washington St., Suite 501, Pittock Block, Area Code 503, 221-3001.

RENO, NEV., 89502, 2028 Federal Bldg., 300 Booth St. Area Code 702, 784-5203.

RICHMOND, VA., 23240, 2105 Federal Bldg., 400 N. 8th St. Area Code 703, 782-2246.

ST. LOUIS, MO., 63103, 2511 Federal Bldg., 1520 Market St. Area Code 314, 622-4243.

SALT LAKE CITY, UTAH, 84111, 1201 Federal Bldg., 125 S. State St., Area Code 801, 524-5116.

SAN FRANCISCO, CALIF., 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave. Area Code 415, 556-5864.

SAN JUAN, P.R., 00902, Room 100, Post Office Bldg., Area Code 809, 723-4640.

SAVANNAH, GA., 31402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. Area Code 912, 232-4321.

SEATTLE, WASH., 98104, 8021 Federal Office Bldg., 909 First Ave. Area Code 206, 442-5615.

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON, D.C. 20402

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. GOVERNMENT PRINTING OFFICE

First-Class Mail

U.S.MAIL

CR - MAY 46129
UNIVERSITY MICROFILMS
SERIALS SECTION
300 NORTH ZEEB RD 48106
ANN ARBOR MICH

More Than 100,000 Pages of census information in compact, economical package of 1,800 microfiche sheets.

Census Retrospective for 1968-1969-1970 on microfiche helps you to plan realistically for the future. These reliable statistical reports take the guesswork out of where to invest your money for tomorrow's profit.

With these 288 reports you'll get the solid facts on—

- developing markets here and abroad
- changing consumer tastes
- shifting population patterns
- fluctuating manpower supply
- changing social trends
- and much more

Find out for yourself .... Send for your free descriptive brochure now.

Mail to: National Technical Information Service
U.S. Department of Commerce
Springfield, Va. 22151

ISS

☐ Please send me your brochure CENSUS RETROSPECTIVE on Microfiche. It gives me a full catalog and clear description of this valuable package of census data for 1968, 1969, 1970. Includes price list.

☐ Also send me your brochure NTIS INFORMATION SERVICES.

NAME .....

TITLE ..... ORGANIZATION .....

ADDRESS .....

CITY, STATE, ZIP .....